BOROUGH OF PRESTON.

ANNUAL REPORT

OF THE

MEDICAL OFFICER OF HEALTH

TO THE

URBAN AND PORT SANITARY AUTHORITIES.

FOR THE

Year ending December 31st, 1914.

H. O. PILKINGTON,

Medical Officer of Health,

Medical Officer to the Port Sanitary Authority,

Medical Superintendent Isolation Hospital.

ROYAL STATISTICAL SOCIETY
9 OCT 1915

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Report of the Medical Officer of Health.

TO THE CHAIRMAN AND MEMBERS OF THE HEALTH COMMITTEE.

Gentlemen,

This Report deals with the past year of 1914, during which time the conditions of the town have been very much the same as in recent years. There has been no increase in area, but I do not propose to dwell upon the non-inclusion of suburbs and out-lying districts, beyond repeating what was said in my last report, viz., that in this respect the Borough stands at a disadvantage with many neighbouring towns, and that this fact should be borne in mind when making comparisons as regards amount of mortality, or the prevalence of disease.

The Census of 1911 showed a population of 117,113, and the natural increase—the excess of births over deaths—would have been sufficient to raise it to very nearly 120,000, whereas the estimated population for 1914 is not more than 118,514. It is upon the basis of this last named figure that the vital statistics for the year have been calculated, and the results are shown in the appended Tables, but in Tables I. to IVa. the figures are drawn from the Registrar General's returns, and include the deaths at the Workhouse—situated outside the Borough boundary—of all inmates who were formerly resident in the town.

The number of deaths, registered from all causes, during the past year was 1,681, and the resulting rate of mortality—14.18 per thousand—is absolutely the lowest that has ever been recorded.

Dealing with the various diseases in the order in which they stand on the Weekly Mortality Sheets, it is satisfactory to find that the town has again been free from Small Pox, no case of this disease having been reported, or otherwise brought under observation. But from time to time throughout the year cases appeared not only in the seaports, but in the inland towns, some of the latter being in Lancashire and Yorkshire, and therefore at no great distance from Preston.

The number of children for whom exemption from vaccination is applied for, and obtained, is a growing one, and therefore the amount of material susceptible to infection, and consequently dangerous to the community, is each year steadily increasing. Amongst the school children who were medically inspected during the year, fifteen per cent. were found to have no vaccination mark, and the proportion of unvaccinated amongst the children admitted as patients to the Isolation Hospital was even greater. It seems a strange anomaly that while the prophylactic treatment of other diseases is being encouraged and extended, the method which time has conclusively shown to afford protection against one of the most loathsome and dreaded of diseases should be allowed to fall into disuse. In the event of an outbreak it will be little consolation to reflect that Small Pox is not the only danger to which the country has remained blind, or to the means of protection from which it will probably turn, with feverish activity, at a time when the foe may be said to be at our very gates.

Since the defence afforded by vaccination is gradually but steadily being broken down, it becomes more than ever necessary that means should be in readiness for the removal, isolation, and treatment of the first cases attacked. In recent Reports the existing Small Pox Hospital has been condemned as worn-out, dilapidated, and unfit for further use, and after inspection this condemnation has been confirmed by the Local Government Board. It has therefore been decided that a new building shall be erected upon the existing site, and plans have consequently been prepared, but like many other questions involving expenditure, the increased expenses rendered necessary by the war have served to keep the matter in abeyance.

As regards Typhoid Fever the year has been a satisfactory one, the number of cases reported having been 45, whilst the deaths have numbered 10, the case mortality thus standing at 22.22 per cent.

Of the patients, 26 were removed to hospital, where 6 died, but of these deaths no less than 3 were due to causes other than Typhoid Fever, or to causes which, though associated with the Fever, by their severity took precedence as the immediate cause of death.

Where the patients were treated at home, measures were taken to secure isolation, and as far as possible to protect the other members of the household. Properly constructed pails were supplied for the excreta, and this after disinfection was removed and destroyed each day. In but few instances was a second member of the family attacked.

The epidemic of Scarlet Fever which had been persistently prevalent during 1913, continued with unabated severity during the whole of the past year. Although latterly there have been some indications of a reduction in the number of fresh cases, the infection continues to be widely spread even at the present time of writing. Having regard to the continued efforts which have been made to control and cut down the outbreak, it may seem strange that a greater amount of success in this direction has not been attained, and one cannot but wonder that any material still remains susceptible to attack. As usual the great difficulty has been in connection with the cases sufficiently mild as to have remained unrecognised, or in those, which from selfish motives, were deliberately concealed.

In the early part of the year Posters were again affixed in all prominent places throughout the town calling attention to the danger which a child, recovering from Scarlet Fever, ran by undue or too early exposure, and to the probability of the infection being in this way passed on to any healthy children with whom the patient might come into contact. Attention was also called to the penalties to which parents and guardians were liable if they allowed a child, whilst in an infectious condition, to frequent the streets, or to attend at public entertainments, picture shows, or similar exhibitions. A prosecution for a flagrant offence of this description was taken in November, in the hope that it might serve as a warning to others. Both parents were summoned, and a conviction and fine were obtained in each instance.

In its course throughout the year the general character of the disease was mild, but during March and April, and again towards the close of the year, there was a tendency for it to assume a more severe, and even septic appearance. In some instances there was a diphtheritic condition of the throat, leading to a suspicion that there was a double infection, a combination of the two diseases in question.

The number of cases notified during the year was 1,137, of which 42 terminated fatally, these deaths representing a case mortality of 3.69 per cent.

No death from Measles occurred during the first quarter of the year, but with the beginning of May the cases of illness began to increase in number and deaths from this cause were registered during each of the succeeding months, November and December furnishing the heaviest return. The total number of fatal cases was 45, of which all, with three exceptions, occurred in children under the age of 5 years. The fatality from this disease has been proved to be in inverse proportion to the age of the child attacked —the younger the child the more serious is the outlook—and this affords a good reason for special efforts in safeguarding young infants from the risk of infection.

Clause No. 103 of the recently obtained Preston Corporation Bill, 1914, provides that the parent or guardian of any School-going child, who suspects the presence of Measles, or certain other specified diseases, in any member of the family, must notify this to the head teacher of the school which the child is attending.

This clause, as required by the Act, was advertised in the local papers, and by means of handbills distributed throughout the town. In order to make sure that the information was really received by the persons interested I had an additional number of hand-bills forwarded to the various head teachers with the request that they would distribute them to the children in attendance at school.

Appended is a copy of the handbill in question :

Borough of Preston.

Preston Corporation Act, 1914.

PREVENTION OF THE SPREAD OF MEASLES, &c.

Notice is Hereby Given pursuant to section 97 (3) (a) of the Preston Corporation Act, 1914, of the following provisions of the above Act, viz. :—

To prevent the spreading of Measles, &c.

Section 97 (1) Any parent or guardian having personal charge of a child in attendance at a school, who is aware of, or has reason to suspect, the occurrence of any of the diseases known as measles, german measles, chicken pox, or whooping cough, in any member of the family and who fails forthwith to notify such occurrence to the head teacher of the school, shall be liable to a penalty not exceeding twenty shillings.

(2) If any person not less than sixteen years in age, while suffering from any one of the diseases of measles, german measles, chicken pox, or whooping cough, wilfully exposes himself without proper precautions against spreading the disease, in any street, public place, shop, inn, or any public conveyance, or being in charge of any person so suffering, wilfully exposes such sufferer, he shall be liable to a penalty not exceeding five pounds.

(3) (a) The Corporation shall cause to be given public notice of the effect of the provisions of this section, by advertisement in two newspapers published and circulating in the borough, and by handbills and otherwise in such manner as they think sufficient, and this section shall come into operation at such time, not being less than one month after the first publication of such advertisement as aforesaid, as the Corporation may fix.

(b) Copies of the Newspapers containing the advertisements shall be sufficient evidence that the provisions of this subsection have been complied with.

(4) In this section the expression "school" includes a Sunday School.

AND NOTICE IS HEREBY ALSO GIVEN that the above provisions of section 97 will, pursuant to sub-section (3) (a) of that section, come into operation at such time not being less than one month after the first publication of this notice as the Corporation have fixed, viz., the first day of November, 1914.

Dated this 25th day of September, 1914,

Town Hall, Preston.
ALFRED HOWARTH,
Town Clerk.

The object is of course to obtain early information of the presence of the disease in order that both the home and school may be inspected and the necessary measures taken to prevent the spread of infection.

In July, when the disease appeared to be gaining ground, copies of the Poster used in previous years, were affixed on the public hoardings, near the entrance to mills, schools, and churches, and other prominent situations.

This is a disease which year by year is causing a considerable loss of infantile life, but one which as regards both its frequency, and its fatality, is to a great extent under the control of the people themselves. Surely in the course of time it will come to be understood that the disease is essentially a dangerous one, that it is one from which no child need of necessity suffer, and that should a child unfortunately be affected it is the duty of those in charge—no matter at what inconvenience—to see, both for its own sake and the protection of others, that it is kept warm, within doors, and apart from those liable to contract the infection. Many of the deaths ascribed to Measles are really due to Bronchitis or Pneumonia, the consequences, on the part of those in charge, of the want of that patient supervision so necessary in the treatment of this disease.

Whooping Cough, which so often accompanies or follows an outbreak of Measles, was the cause of 23 deaths, all under the age of 5 years. The rate of mortality—0.22 per thousand—was exceeded in the great majority of the large towns. Similar measures were adopted in dealing with this disease, as in the case of Measles; one object especially aimed at, being the prompt exclusion from school of any child who might be the means of conveying or spreading infection.

Compared with that of the last few years, the amount of Diphtheria was not excessive, 219 cases having been certified, of which number 24 proved fatal, thus showing a case mortality of 10.95 per cent., and a death rate of 0.22 per thousand.

There was a wide range as regards severity of attack, some of the patients succumbing at once to a general poisoining of the system, whilst in others, even where the throat symptoms were well-marked, the illness was slight and quickly followed by convalescence. As will be seen from the Isolation Hospital Report, a number of the very severe cases were removed, and died within a short time—in some cases a few hours—after admission. The gratuitous distribution of Anti-Diphtheritic Serum has been continued, and has been made use of to a very considerable extent by the Medical Practitioners of the town. The fact that a supply is always on hand has prevented delay, and enabled the serum to be used in the early stages, the time when it is most likely to have a beneficial effect. Not seldom a patient has been injected both before, and immediately after, removal to hospital.

In dealing with this disease the establishment of a Municipal Laboratory has proved of the greatest service, not only for the purpose of settling the diagnosis, but also for ensuring that patients are not discharged from hospital until the absence of the specific germ in swabs taken from the throat, etc., indicates freedom from disease.

In addition to the disinfection of all premises in which there had been the removal, recovery, or death of a patient, a careful inspection was made in order to ascertain if any conditions existed likely to have caused or to have assisted in causing the disease. Absence of sunlight, damp low-lying situations, and unpaved streets permitting pools of muddy water to form after rain, are productive of relaxed or ulcerated throats; and if not actually, in certain cases, the cause of Diphtheria, at any rate lead up to a condition favourable to the reception and growth of the dangerous microbe.

The deaths from Croup have for some years past been a decreasing number, and only 2, both those of young children, were ascribed to this cause. The reason for this decrease is because all severe inflammatory affections of the larynx are reported as Diphtheria, or, what comes to the same thing, as Membranous Croup.

The deaths from Diarrhœa numbered 58, of which 52 were those of infants under the age of 12 months, and the remaining 6 those of children between the ages of one and five years. Although this mortality is sufficiently—and more than sufficiently—heavy, it is satisfactory when compared with the high death rate due to this cause from which the town suffered in former years.

As usual it was in the autumn that Diarrhœa especially prevailed, the month of September being debited with 45 out of the total 58 deaths for the year. Special visits were made to the homes of 54 of the children who died from Diarrhœa, in order to ascertain the method of feeding, and the general conditions under which they had been living. Of the houses 47 are described as clean, and 7 as dirty. Whilst of the children 9 had been breast fed, 5 partially breast fed, and 40 artificially fed.

These latter figures contrast very forcibly with the conditions found when visiting the newly born infants reported under the Notification of Births Act. These visits in question are paid within a few days after birth, and out of 2,836 less than 300 were found to be artificially fed. This shows that at first breast feeding is the rule, but is soon gradually, and for various reasons discontinued, until at the end of a few months artificial feeding takes its place. Many of the artificial foods are unsuitable for an infant a few months old, because they contain matters which at that early age cannot be digested, but in addition—and this is a prolific cause of Infantile Diarrhœa—there is the dangerous habit of giving young infants food from the table of their parents, suitable only for adult digestion.

The encouragement of mothers to continue breast feeding is an important and valuable part of the work of a Health Visitor, and their efforts in this direction will no doubt be supported by the various Maternity Centres, and Schools for Mothers which are now in process of formation throughout the Country. The progress already effected in this direction, and the general improvement which of late years has been made in the sanitary condition of the town have all tended to bring about a reduction in the Diarrhœal Mortality; but in addition to this the temperature and climatic conditions have, during recent years, alike been favourable. A high temperature and light rainfall towards the end of August and the beginning of September, when "the fall of the leaf" presages the end of Summer and commencement of the Autumn season, are conditions favourable to the development of those diseases of which Diarrhœa may be taken as a type. It is at this season that the house-fly, driven indoors by the colder temperature of the nights adds to the danger of infected food, since he comes laden with bacteria from his habitat and breeding place in the middenstead and refuse heap, ready to deposit the germs, as he perambulates over the exposed articles of food, or ends his drowning struggles in the milk jug.

There were 88 deaths from Consumption, a number somewhat lower than that for the previous year, or for the average of the past six years.

The prevention and control of Consumption is a subject with which most Sanitary Authorities have now for some time past been dealing, but the rate of progress, and the consequent results, vary very much in different localities. The course generally adopted in the larger towns has been the appointment of a Tuberculosis Officer, the opening of a Dispensary, at which patients can attend for examination, advice, and—if necessary—treatment, and the provision of a Sanatorium in which suitable cases can have the benefit of open-air treatment. The last named requirement can be met either by the erection of a special building, or by the leasing of a sufficient number of beds in some already existing Institution.

Under the joint direction of the Town Council and the Local Insurance Committee a large and suitable house, situated in a central and easily accessible position, was adapted as a Dispensary, and placed under the management of Dr. Middleton Hewat, who was appointed Tuberculosis Officer, the Medical Officer of Health holding an advisory and supervisory position. A number of beds were rented at various Institutions for Sanatorium purposes, but the number thus available was very limited and quite insufficient for the requirements of the town.

At one time it was thought possible that some arrangement might be made by which a sufficient number of beds for the requirements of the Borough might be rented from the County Authority in one of the large Sanatoria which it was understood would shortly be in process of construction. Such a course was however found to be impossible, and it was then decided to erect a local Sanatorium—and Hospital for advanced cases—dedicated to the use of the town alone, and sufficiently large to meet all present requirements. The selecting and obtaining of a site in every way suitable for such a purpose is a work of considerable difficulty, and one which made great demands upon the time, patience, and judgment of the Committee to whom the task had been entrusted.

Questions of position, soil, and aspect; of distance and accessibility; of sewerage and water supply; of the character of the surrounding neighbourhood, both now and in the future, had all to be considered; and it was only after visits had been made to a great number of places that the choice eventually fell upon a piece of ground some 15½ acres in extent, forming part of Ashley Hall Farm, distant one mile from Longridge Station, and about eight miles from the centre of this town.

Plans of the proposed buildings have been prepared, but, as in the case of many similar works, the financial pressure caused by the war, has resulted in a postponement of the scheme.

Arrangements with the National Society for the Prevention of Consumption, resulted in the Tuberculosis Exhibition, which had been travelling the Country and had already been shown in many places, coming to the town. By means of exhibits of various kinds—such as models of sanitary and insanitary dwellings—striking pictures, and wall sheets of statistics, it endeavoured to impress upon the public mind the fact that Tuberculosis, whilst causing so much sickness and mortality, was really a preventable disease, but also one which, if precautions were neglected, could, mainly through the sputum of the patient, readily be spread throughout a household. These points were further stated and emphasized in a series of Evening Lectures given by Medical men who kindly volunteered, and these Lectures, like the Exhibition itself, were well attended. This took place at the beginning of the year—the month of March—at which time there was a strong feeling throughout the whole country in favour of a crusade against the ravages of Tuberculosis. The subject was eagerly taken up by persons of all ranks, but just as "one nail drives out another" so it has now to some extent been displaced by the all-important War, and no doubt to some people there seems little use in trying to save a few poor lives, when the blood of the selected manhood of the country is being so lavishly poured out on the battle-fields of France and Flanders.

The whole subject of Tuberculosis and the work done at and in connection with the Dispensary, are exhaustively dealt with by Dr. Middleton Hewat in the annexed Report.

The mortality ascribed to Bronchitis was considerably below that of recent years, the deaths numbering 157, as against an average of over 200 for each of the past six years.

To Pneumonia—Inflammation of the Lungs—118 deaths were ascribed, a number very much in accord with that from the same cause for a considerable period. Not only was the amount of sickness from these combined causes heaviest amongst infants and old people, but the death rate rose in proportion to the patients being near one or other of the extremes of life, since diseases of this class are then more fatal than when affecting young adults or those of middle age. Again as usual the greatest mortality was recorded during the cold weather, at the commencement and end of the year.

Under the next heading are included the deaths of children, prematurely born, and of those who come into the world suffering from congenital debility, and whose hold on life does not carry them over a few weeks, days, or even hours. To these must be added the deaths of infants from Convulsions due to teething, or caused by other sources of irritation; and of those from Marasmus, Meningitis, etc., making a total of 241 from these causes under the age of twelve months.

Table IVa. gives an analysis of the deaths from all causes occurring under the age of twelve months, dividing them into weekly periods up to the first month, and afterwards into periods of three months up to the age of one year.

Of the deaths due to Prematurity, 51 took place in the first month, and of these 41 died almost immediately after birth, none surviving more than the first week.

There is good reason to believe that the practices with regard to the limitation of families which have had such a marked effect in reducing the birth rate are also responsible for a number of these deaths, and since the same remark applies to a number of the deaths attributed to Atrophy, Debility, etc., the extreme seriousness of the position cannot be over-estimated. Practices which have the effect of causing such a reduction in the number of children born, and of ensuring the early deaths of others who come into the world just alive, cannot but be a menace to the prosperity, and indeed the very safety, of a nation.

The total number of deaths from all causes under the age of twelve months was 395, and this figure represents an Infantile Mortality rate of 140, in other words out of every 1,000 children born, 140 failed to complete the first year of their lives. High as this figure is, it shows an improvement upon that of former years, 155 representing the average for each of the past ten years.

Of the remaining deaths, 122 were caused by Old Age, and 62 by Violence, i.e., Suicide, and the various forms of accident—both these figures being very similar to those from the same causes in previous years.

To Other Diseases, 643 deaths have been attributed. These are deaths which cannot be classified under any of the headings which have now been dealt with, but the particulars concerning which are given in Table IIIa. this being one of the Tables which in addition to the deaths within the Borough, includes those at the Fulwood Workhouse.

Comparing the deaths from certain specified causes with those from the same causes in the previous year, it will be found that the deaths from all forms of Tubercular disease are 150 as against 181, those from Organic Affections of the Heart 160 against 171, and from Cancer and all kinds of malignant disease, 137 as against 109.

The Births recorded are practically the same as in the previous year, the number being 2,818, thus showing a rate of 23.78 per thousand, whilst, owing to the reduced death rate, the natural increase amounts to as much as 1,137 lives. Half a century ago, say from 1865 to 1875, the birth rate for each of those ten years exceeded 40 per thousand, and yet, owing to the death rate being more than proportionately higher, the average annual increase was less than at the present time.

The requirements of the Notification of Births Act, 1907, have been satisfactorily carried out. The following statement shows the number of births notified and registered during the year, and also the number of children notified as still-born, as well as the number of these latter who have been interred in the Cemetery.

The difference between the number of births notified, and that registered has been explained in previous Reports, and is due to the fact that notification must be made within 36 hours after birth, whereas registration may be delayed for a period of six weeks. Hence some births which took place, and where notified at the end of 1913, would not be registered until the beginning of the past year, whilst others notified at the close of the past year would be registered during the first few weeks of 1915.

NOTIFICATION OF BIRTHS.

Number of Births Notified during the Year ...	2865
,, ,, ,, Registered ,, ,, ,, ...	2818
Number of Still-Births Notified during Year ...	101
Number of Still-born Children interred in Cemetery ...	152
Number belonging to Borough	145

Table No. 9 gives a summary of the work accomplished by the Sanitary Officers in their respective districts during the past year. The work of converting privies and ashpits to the water carriage system is now practically finished throughout the town, although an occasional one, concealed in some out of the way place, and so having escaped observation, may still require attention. It has therefore been possible to devote more time to the inspection of property under the Housing and Town Planning Act, and houses to the number of 608 have in this way been examined. In certain instances where the defects found were not of a serious nature, it was possible to get them remedied upon verbal representation to the owner, but in the majority of cases notice was served under section 15 of the Act. The flagging of yards, lobbies, and back passages has been proceeded with, and a considerable amount of very useful work has been accomplished in this direction.

Under the Corporation Act, 1914, to which reference has already been made, power was obtained to require the flagging and draining of lobbies and passages. Many of these are covered ways running between every two or more houses, and affording means of communication between the street and the house yard of which they may be said to form a part. Not seldom they are used for the purpose of drying clothes, and the water falling from these upon the pebble pavement has the effect of loosening the stones, causing holes and ruts which gradually increase in size until the whole pavement becomes broken up and disorganized. The improvement in such a passage, after being flagged, is well marked, and it then becomes possible to keep it in a clean and sanitary condition.

In the same Act, under Part VIII., dealing with Streets and Buildings, useful powers were obtained with regard to the area of habitable rooms, and the provision of proper accommodation for food storage in all new houses.

Part X. contains a number of valuable clauses dealing with the Prevention of Infectious Disease, and Sanitary matters generally. The power to require parents to notify the head teacher of a school of the presence of Measles, etc., in the family, or at the residence, of any child attending that school has already been referred to when dealing with that disease. Other clauses give powers to deal with Ice Cream Manufactories, and with premises used for the sale, etc., of food intended for human consumption, to require the disinfection of premises in which cases of Pulmonary Tuberculosis have occurred, or of any which are in a verminous condition, and in cases of poverty to grant compensation to a wage earner who ceases work for the sake of preventing the spread of infection.

By Clause 114, the power given by Sec. 22 of the Public Health Amendment Act, 1890, to the Surveyor of dealing with Sanitary Conveniences in Manufactories is now extended to the Medical Officer of Health. The following Clause, 115, requires Contractors or Builders engaged in the construction or alteration of any building to provide reasonable sanitary accommodation for the use of the workmen employed. Clause 121 requires that portable dust bins, of a size and shape to be approved by the Corporation, shall be provided where required. Greater control is given over the Common Lodging Houses by Clause 124, which provides that in future the registration shall be a yearly one. A better class of service, and the prevention of some unnecessary cruelty is obtained by Clause 127, which requires the registration of all Slaughter-men in the Corporation employment. Altogether, as regards Sanitary matters, the Local Act of 1914, without conferring any decided new powers upon the Sanitary Authority, has had the effect of increasing its scope of work, of strengthening its hands, and so of enabling it the better to carry on the warfare against disease and insanitary conditions in the town.

The Bye-Laws relating to Nuisances, which received the sanction of the Local Government Board in February, 1914, give the Authority certain powers with regard to the provision and method of construction of Receptacles for Manure, in connection with buildings in which horses, cattle or swine are kept. They also provide for the removal of manure from such receptacles at least once every week during the months of April to October, and once in every fortnight during the months of November to the following March. With regard to several of these manure pits, considerable improvements have been effected. In many cases the size has been reduced, the bottom has been raised to the level of the ground, and covers have been provided which serve to protect the contents from the inroad of flies, and prevent the escape of steam and smell into the outer air. It is more difficult to secure their being emptied with the regularity and frequency demanded. The weekly removal is asked for during the months when there is little demand for manure, when the farmers are occupied with harvest work, and when men, horses and carts are alike difficult to obtain. Owing to the War the removal of large quantities of manure on the railway has been practically stopped in consequence of so many waggons being required for military purposes. Still as regards both the storage of manure, and its removal, a considerable amount of good has already been effected, and a judicious and tactful use of the powers conferred by the new Bye-laws will no doubt result in still further improvements.

The routine work of inspection has been carefully and systematically carried out, as shown by the number of visits made to Common Lodging Houses, Cow Sheds, and Milk Shops, Slaughter Houses and Markets, Offensive Trades, etc. In the Education Report I referred to the fact that the latrines at the various elementary schools had now been placed under the supervision of the Sanitary Inspectors, with good results.

The Canal Boats have received regular attention, and a Report dealing with their number and condition was as usual forwarded in the early part of the year to the Central Authority. The following is a copy :—

COUNTY BOROUGH OF PRESTON.

Canal Boats Acts, 1877 and 1884.

The following report deals with the condition of Canal Boats coming under the jurisdiction of this Sanitary Authority, for the year ended December 31st, 1914.

One change has taken place during the past year in regard to these boats, 32 still remaining on the Register, 23 having been cancelled, thus showing that a total of 55 has been registered.

The boat " Kate," Number 24, was broken up on March 7th by the owners, Messrs. Baines Brothers of this town, and the certificates duly returned to this Authority.

All the boats have been inspected, as have also others registered at Lancaster. No cases of infringement of the Regulations were found, although several changes of masters have taken place, which were not notified, but found at the times of inspection.

On July 27th, through the death of the owner, Samuel Kent, the boats " Mary Anne " Number 6, " Express " Number 7, " Herbert " Number 34, and " Farewell " Number 47, were transferred to the Wigan Coal and Iron Co. The boat " Belle " Number 3, has been laid up during the whole of the year, as she was last year, whilst the " Mary Anne " Number 6, and " Harold " Number 32, have been laid up during part of the year.

One case of Infectious Disease—Diphtheria—was found on the boat " Ann " Number 15, the patient being a boy nearly 5 years of age; he was at once removed on the Inspector's request, and the cabin fumigated.

The work of supervision has been carried out, as in the past eight years, by Inspector Crossthwaite, in addition to his other Sanitary duties, no special remuneration being provided for this portion of his work.

The following table shows the details of occupation and inspection during the past ten years.

	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914
No. of Inspections	113	111	132	129	138	123	123	108	115	98
Males in Occupation	142	146	169	162	167	150	162	153	138	112
Females in Occupation	71	59	67	78	82	81	73	60	65	59
Children in Occupation	68	33	46	79	87	81	75	50	44	58

All the other details are shewn on the attached statistical supplement.

H. O. Pilkington,

Medical Officer of Health.

The vans and tents of the nomadic population who visit the town at holiday time, or who pass through it on their way to or from the seaside or other pleasure resorts, have been visited, and in addition to an examination of their sanitary condition, enquiries were made, and precautions taken, with a view to prevent the possible introduction of infectious disease.

House drains to the number of 389 have been examined and tested. Where a superficial examination of premises, made either on account of the presence of illness, at the request of the tenant, or for other reasons, revealed a condition in any way suspicious of defective drainage, the smoke test was applied, and where necessary the drains were opened up and repaired, or in certain instances re-arranged or re-laid.

Smoke observations have been taken in 342 instances. This number is somewhat less than that for the previous year but after the outbreak of the War it was considered advisable not to exert too much pressure in this direction.

The disinfection of all premises in which there had been one or more cases of infectious disease was carried out on the first available opportunity, and the same course was adopted in the case of any school amongst the scholars of which infection appeared to be prevalent.

Picture Palaces are largely attended by children, and are often filled to their utmost capacity, and for these reasons they play a decided part in the spread of infectious diseases. The proprietors have been advised and encouraged to use disinfectants, but in addition the buildings have from time to time, as occasion required, been disinfected by the Corporate Staff.

Table No. 10 gives a list of the visits paid under the Factory and Workshop Act, and of the defective conditions which were then found and afterwards dealt with.

The following Table, No. 11, gives a complete list of all Factories, Workshops, and Offensive Trades at present on the Register, whilst Table No. 5A. gives further particulars and information as required by the Act of 1901.

Of late years the Sanitary condition of Factories, Workshops, Workplaces, etc., has received, and very properly received, constant and steadily increasing attention. It is equally important that a man should have healthy surroundings during his hours of labour as that he should have them during his time of rest and relaxation, indeed if anything it is more important since in the case of textile goods, and articles of wearing apparel, insanitary conditions may not only affect the worker, but also the future wearer of the articles in question. To fully realise the great improvements which have been effected during the past twenty-five or thirty years, one ought to be able to remember the filthy condition of the sanitary arrangements which then obtained in the mills of this as of other cotton manufacturing towns, and then compare them with the efficient, and often elaborate, system of the present day. In the smaller Workshops also there is now a better condition as regards ventilation, sanitary accommodation, lime-washing, and general cleanliness, and these are matters which are receiving daily attention.

A good deal of work has been done in connection with the Shops Act, 1912, and 976 visits were paid to various establishments in order to see that the regulations were being properly carried out. The delivery and subsequent collection of the voting papers in connection with the Drapers' Closing Order, was also carried out by the Sanitary Inspectors, who also visited a number of cases and gave verbal instructions as to the proper display of Closing Notices.

A prosecution taken against a Shop-keeper for not allowing his employees the specified half-holiday resulted in the imposition of a fine of 10s. and costs in each of two separate cases.

Soon after the outbreak of the War, the formation of recruiting depôts, and the constant arrival into the Town of large numbers of men from other districts, threw upon the Sanitary Department a considerable accession of work. Not only had these depôts and their sanitary arrangements to be frequently inspected, but constant vigilance had to be exercised in order to guard against the possible importation into the town of some form of infectious disease. Disinfectants were freely and gratuitously provided, and in conjunction with the military authorities the arrangements were satisfactorily carried out.

The Public Abattoir, and such private slaughter houses as still remain in occupation, have been regularly inspected, and meat to the amount of 84,627 lbs. has been condemned and destroyed.

The system which has now been in operation for many years still continues in force, and is attended with satisfactory results. The butchers submit all doubtful carcases for examination, on the understanding that they must abide by the Inspector's decision as to whether the meat is, or is not, fit for human consumption. In any very doubtful case the decision of the Medical Officer must be regarded as final. Unsound meat, concerning which due notice has not been given, will be liable to seizure, and the person in whose possession it was found will be open to a subsequent prosecution. During the past year there was no case in which such proceedings were necessary.

Fish of various kinds to the weight of 16,624 lbs. was also condemned and destroyed, almost the whole of this having been taken at the wholesale market in connection with the Railway Station.

Under the Food and Drugs Adulteration Act, samples to the number of 304 were purchased and submitted for analysis, and these may be divided into 271 purchased formally, and 33 informally. Of the first named lot, 256 were certified to be of genuine or satisfactory quality, whilst 10 samples of milk, one of cream, one of lard, one of white pepper, and two of whisky failed to come up to the required standard. In Table No. 15 full particulars are given as to the action subsequently taken with regard to the vendors of these defective samples.

Table No. 16 gives information as to the result of the analysis of the 33 samples which were informally obtained.

The work of the Health Visitors, four in number, is summarised in Table No. 12. The first and most important part of their duties is the visiting of the births, as soon as possible after notification has been received in order that, in those cases in which it is required, the mother and infant may have the benefit of their instruction and advice. It may be noted that the amount of work recorded in District D is less than that of each of the other three districts, but this is to be accounted for by there having been an interval of six months duration—from January to June—between the resignation of the late Health Visitor, Miss Reid, and the appointment of Miss Whittaker, who holds office at the present time.

In the Annual Report for 1913, reference was made to the probable appointment of a School Nurse, and this took place in July of last year. The effect has been since then to relieve the Health Visitors of that portion of their duties relating to the visiting of children reported by the Schools Medical Officer as requiring medical attention, and also of the more onerous and disagreeable duty of examining the children's heads.

They have continued the work of visiting cases of Measles, Whooping Cough, or the minor ailments reported by the School Teachers as occurring amongst the children, or which come through other sources to the notice of this Department.

The following Tables, A and B, give the number of these cases which occurred in the various schools, and the age periods of the children affected :—

TABLE A.

	Scarlet Fever.	Measles	Whooping Cough.	Diphtheria.	Phthisis	Chicken Pox.	Mumps.	Ringw'rm Eczema, Sore Eyes, Heads, &c.
Parish Church	6	14	8	...	...	...	1	...
St. James	1	14	10	1	...	1	...	5
St. Augustine's	19	58	9	1	...	1	4	12
St. Saviour's	4	8	...	2	...	1	3	3
Grimshaw Street British	12	5	...	...	...	...	3	3
St. Stephen's	1	2	1	...	...	7	7	1
Christ Church	5	25	1	...	...	...	2	2
Hincksman Memorial	...	32	7	1	...	1	1	2
St. Mary's R.C.	6	30	6	1	...	2	3	4
St. Wilfrid's	6	6	4	1	...	12	4	1
St. Michael's	...	...	...	...	...	...	...	9
Sacred Heart	1	5	6	...	...	5	2	10
Ashton Wesleyan	...	...	1	...	...	1	1	2
St. Andrew's	4	4	16	1	...	1	5	3
Roebuck Street Council	10	14	50	5	...	15	1	9
St. Walburge's	12	14	1	2	...	1	2	1
St. Mark's	..	3	...	...	...	...	...	1
St. Peter's	1	7	20	...	...	7	5	6
Emmanuel	4	14	4	1	...	...	...	6
Plungington Road National	6	...	1	...	...	...	...	1
Eldon Street Council	1	...	7	...	...	3	...	4
Moor Park Wesleyan	7	24	28	...	...	11	2	16
English Martyrs' Elementary	21	40	15	1	...	4	2	9
English Martyrs' H.G.	...	...	...	1	...	2	1	...
St. Jude's, Kent Street	3	7	11	1	...	14	...	9
Park Secondary	1	2	...	...	...	...	2	...
Deepdale Council	...	9	3	...	...	4	...	3
St. Paul's	1	13	...	...	...	...	2	1
St. Ignatius' Elementary	6	2	21	1	...	1	1	16
St. Ignatius' H.G.	2	4	14	1	...	1	3	6
St. Thomas'	1	7	6	...	...	2	6	4
All Saints'	2	28	12	...	...	1	3	14
Holy Trinity	...	1	1	...	...	...	5	...
Orchard U.M.F.C.	1	1	1	...	...	...	...	...
St. Luke's	12	...	...	2	...	...	3	11
St. Joseph's	37	3	14	5	...	9	4	21
St. Matthew's	24	3	1	7	...	7	...	4
St. Matthew's Branch	3	23	3	...	...	2	...	2
Tennyson Road	3	4	...	...	...	1	4	6
St. Mary's National	6	7	9	...	...	4	...	1
St. Mary's Street Wesleyan	5	...	3	1	...	3	7	2

TABLE B.

	0—3	3—4	4—5	5—6	6—7	7—8	8—9	9—10	10—	Total.
Scarlet Fever	...	1	4	27	63	30	29	37	43	234
Measles	1	39	94	105	77	31	29	14	43	433
Whooping Cough ...	...	25	71	96	67	14	7	4	10	294
Diphtheria	...	1	1	6	13	3	2	8	2	36
Phthisis	...	...	...	...	...	...	...	...	...	...
Chicken Pox	...	7	16	43	16	13	7	10	12	124
Mumps	...	...	6	11	25	8	9	13	17	89
Ringworm, Eczema, Sore Eyes, Heads, &c	...	4	13	39	46	23	20	19	46	210

The question as to the establishment of one or more "Mothers' Centres and Infant's Clinics" was discussed at various times during the year, but no action was taken. Since July of the present year two such Centres, situated in different parts of the town, amongst a working class population, have been in operation and so far promise to have good results. They are practically under the direction of the Health Visitors, who encourage the mothers to bring their children, and are themselves in attendance assisted by certain voluntary helpers, to give advice and instruction where needed. One good effect of these Centres will probably be that they enable the Health Visitors to keep in touch with, and to watch the progress of, those infants whom they have visited at the time of birth. The subject is one, however, which hardly belongs to the past year, and will be more fully dealt with in a future report.

The Register of Midwives shows that a few changes have taken place during the year, the number of those actually practising in the town being somewhat smaller than that dealt with in my last Report. As a rule any change which now takes place must be an improvement—a step in the right direction—because as the older and more illiterate midwife falls out through sickness or the infirmities of age, her place is filled by a younger woman, one better educated, and one better trained in the aseptic methods which form such an essential part of correct midwifery practice in the present day.

If the fault of this latter class is that of being too active, too little disposed to leave things to a natural solution, the same remark applies to the disciples of the older school, who are never so happy as when "laying hands" upon their patient, no matter how unsatisfactory the condition of those hands may be.

The appended Table shows the present number of midwives upon the Register, the changes which have taken place during the year, and the increase in the number of those who are qualified, as compared with the number at the time of the passing of the Midwives Act :—

MIDWIVES ACT.

Number of Names on Register at date of last Report		51
Number of Names added since		3
		54
Resigned on account of failing health	1	
Left town	2	
Deaths...	3	
		6
Number at present on Register		48

Qualified Midwives at passing of Act	7% of total number.
,, ,, at present on Register ...	33% of total number.

At the commencement of the year all the Midwives upon the Register were personally inspected, and an examination made as to the condition of their bags, appliances, etc.

The following Table gives particulars as to the attendance upon women during confinement, the town being divided into the four Districts over which the Health Visitors have charge :—

ATTENDANCE ON WOMEN AT CHILDBIRTH DURING 1914.

(January 1st to December 31st.)

District	Number of Births attended by Midwives without Medical help	Number of Births attended by Doctors	Number of Births in which Midwives required Medical help	Total Births Visited	Per cent. of cases attended by Midwives	Per cent. of cases attended by Doctor
"A" ...	456	126	107	689	66%	18%
"B"...	400	146	85	631	63%	23%
"C"...	441	115	108	664	66%	17%
"D"...	495	232	67	794	62%	30%
Totals...	1,792	619	367	2,778	64.5%	22.3%

During the year notifications were received of 7 cases of Puerperal Fever, of which two terminated fatally, the case mortality being at the rate of 28.60 per cent. One or two of these cases were somewhat doubtful, and amongst the others there was no immediate sequence as regards date of occurrence, they were not situated in the same locality, and there was nothing to raise the suspicion that the infection had been conveyed from one patient to another. An inspection was made as to the condition of the residence of each patient, disinfectants were supplied, and after recovery or death the house, bedding, etc., were disinfected, the bed itself being in certain cases destroyed. Arrangements were made with the midwife for the disinfection of her clothing, etc., and for her abstention from practice for such a period as was considered necessary. Upon resuming duty she was instructed to at once report any suspicious symptom occurring for a time amongst her patients.

On July 1st, an important addition was made to the Sanitary Equipment of the town by the opening of the Municipal Bacteriological Laboratory.

This is situated, in connection with the Tuberculosis Dispensary, at 2 North Road, and the work of the two institutions is carried out by Dr. Middleton Hewat, Assistant Medical Officer of Health. Medical Practitioners in the town are invited to make full use of the Laboratory, and, in order to facilitate this course, outfits are supplied by means of which they can forward specimens of sputum, membrane, or blood from doubtful or suspected cases of Tuberculosis, Diphtheria, and Typhoid Fever. Although these are the diseases concerning which information will most frequently be desired, other bacteriological examinations will, upon request, be carried out.

The Laboratory has proved of the greatest service to the Isolation Hospital, because it not only affords the means of clearing up cases of doubtful diagnosis, but also of ascertaining in cases of Diphtheria that the patient before discharge is clear of all infectious germs. There are a number of cases sent into hospital in which the symptoms are vague, and the diagnosis consequently uncertain, but which—if time allowed—might be bacteriologically examined before removal, and in this way a patient—not suffering from an infectious disease—would be spared the risk attendant upon residence in an Isolation Hospital.

During the half-year—July to December—the following examinations were made :—

Sputa for Tubercle Bacilli...	141
Swabs for Diphtheria Bacilli	109
Blood for Widal's reaction (Typhoid Fever)	18
Other Examinations	8
Total	276

No doubt in the course of time the work of the Laboratory will increase, not only because the institution will become better known, but also because, both in the diagnosis and treatment of disease, the tendency of Medical Science is to make greater calls upon bacteriology.

The rainfall for the year amounted to 35.92 inches, or rather below the average—36.44—for the previous ten years.

During the whole of the year the town has had the benefit of a constant and liberal water supply, and one shown by analysis to be of satisfactory purity, somewhat soft, and well fitted for all domestic purposes. That it should prove to be free from contamination is only to be expected, having regard to the fact that the gathering ground is open moorland, remote from inhabited houses, and that the water after leaving the measuring basin does not see the light until discharged into the storage reservoirs, from which it is conveyed in closed culverts to the town, and so distributed to the consumers.

The sewage of the town continues to be treated as before. Collected in the main sewers, it is conveyed by gravitation to the Pumping Station, situated at the lowest part of the town, and is thence driven by a system of Shones Injectors to the sewage farm, a piece of reclaimed land some 600 acres in extent, situated on the North bank of the Ribble about 5½ miles from the town and near to the junction of the river with the Irish Sea. Here the sewage is distributed over the land, the solid matters serving to enrich and strengthen the reclaimed sandy soil, whilst the liquid, purified by its filteration through the ground is collected in drains and so discharged into the tidal stream.

The solid household refuse of the town is conveyed to the Destructors—2 in number—and there burnt. The capacity of these works for dealing with the refuse has of late been somewhat limited, owing to so many of the workmen having joined the colours, and the difficulty of obtaining suitable and efficient substitutes. This is a matter in which householders themselves can render a considerable amount of assistance. The quantity of material to be dealt with would be greatly reduced if in each house the animal and vegetable refuse were regularly destroyed in the kitchen fire.

This would leave only the more combustible matters—cinders, etc.—and these would be of service at the Destructors in generating the heat required for the production of electricity for the tram-car service.

The systematic destruction in each house of matters liable to putrefaction and decay would not only reduce the chances of a nuisance in the immediate neighbourhood of the dwelling, but would also do away with one of the attractions which the common house-fly finds it so difficult to resist. Decaying organic matter is the very thing upon which it lives, and in which—if undisturbed—it seeks to deposit its eggs. A house in which all foodstuffs are kept carefully covered up, in which no debris or litter is allowed to remain about, in which all waste animal and vegetable matter is each day burnt, and not stored in an uncovered ashbin, is a house which may be expected to be free from invasion of the house-fly, and from the diseases which not unfrequently follow in its train. If only on account of the protection which it affords him, this is a matter always worthy of the attention of each householder, but especially so at a time when public attention is so strongly directed to the economising of labour and the reduction of expense.

The care of the streets and footpaths comes under the control of the Borough Surveyor, and I am indebted to him for the following information as to the amount of work expended upon them during the twelve months.

Sett Paving	21,920 square yards.
New Flagging	11,141 square yards.

This is work which has a direct bearing upon the sanitary condition of the town, not only because it improves the surface of the streets and renders them capable of being more efficiently scavenged, but also because a clean even street surface and a level well-flagged footpath act as incentives to the inhabitants of the street to keep their houses in a correspondingly clean condition.

In six of the principal streets, tree-planting on the foot walks has been continued, and though the atmosphere of a manufacturing town is not supposed to be favourable to vegetable growth, the results have on the whole been satisfactory.

An addition of 3½ acres has been made to the piece of ground at Ribbleton, which as yet can hardly aspire to the name of a Park, but still furnishes a valuable open space and recreation ground for the working classes who chiefly inhabit that part of the town.

H. O. PILKINGTON,

MEDICAL OFFICER OF HEALTH.

September, 1915.

THE ISOLATION HOSPITAL.

Although the number of patients under treatment varied considerably from time to time, the Hospital may be said to have been busily occupied during the whole of the past year. The prevalence of Scarlet Fever in the town during the whole of the twelve months was sufficient to keep the two blocks, devoted to the treatment of this disease, constantly filled. Indeed, the returns for each month showed that the number of patients was considerably in excess of that for which the accommodation was originally intended, but the air-space and ventilation were alike sufficient to prevent any bad effects. It is very desirable that each ward in an Infectious Hospital should from time to time remain empty, in order that it may be cleaned, disinfected, and thoroughly flushed with fresh air. The constant applications for admission prevented this course from being carried out, but everything possible was done as regards the judicious grouping of the patients, and the removal to the small observation wards of such cases as were septic, or presented symptoms of a dose of infection more than usually severe.

The total number of Scarlet Fever cases admitted was 334, to which must be added 44 who were in residence at the beginning of the year, making a total of 378.

Out of this number there were 315 recoveries, 10 deaths, and 53 remaining under treatment, on December 31st, 1914. The deaths were those of severe septic cases, or else of cases in which, in addition to Scarlet Fever, there was some complication such as Pneumonia or Meningitis. The mortality amounted to 3% of the cases admitted to Hospital, as against 4% of those treated at home. Six children were admitted from the Preston Royal Infirmary where they had developed Scarlet Fever whilst under treatment for some surgical affection. These all did well, and at the time of discharge the surgical lesion was either cured or much improved.

There were 26 admissions to the Typhoid Wards, where 2 cases were remaining under treatment from the previous year. Amongst these 28 patients there were 19 recoveries, and 6 deaths, leaving 3 still in residence at the end of the year. The Hospital rate of mortality was 23 per cent. of the admissions, as against 37 per cent. amongst those who remained at home. But in reality there is a much greater difference between the two rates, since 3 of the deaths in Hospital were directly due to causes other than Typhoid Fever, viz., 2 to Cerebral disease, and one to Abscess of the Lung, whilst 2 of the other fatal cases were complicated with Pneumonia or Broncho-Pneumonia.

Out of the 219 cases of Diphtheria reported during the year 95 were removed to Hospital, making with 8 already in the wards a total of 103, and of this number 89 were discharged recovered, 6 died, and, as at the end of the previous year, 8 were left under treatment. In this disease the difference between the Hospital and the home rate of mortality was well-marked, the former being 6.3 per cent. and the latter 14.5 per cent. of the cases treated. Moreover several of the deaths in Hospital were those of cases which were only moved as a last chance, and which succumbed very shortly after admission.

The following Table A shows the number of patients in Hospital on December 31st, 1913, the number of admissions, recoveries, and deaths from each of the three diseases, and the number remaining under treatment at the end of the year.

Table B shows the difference in the case mortality of each of the diseases amongst patients in hospital, and those treated at home.

TABLE A.

Disease	In Hospital, Dec. 31, 1913	Admissions	Recoveries	Deaths	In Hospital, Dec. 31, 1914
Typhoid Fever	2	26	19	6	3
Scarlet Fever	44	334	315	10	53
Diphtheria	8	95	89	6	8

TABLE B.

MORTALITY FROM TYPHOID FEVER, SCARLET FEVER, AND DIPHTHERIA—IN ISOLATION HOSPITAL AND AT HOME.

CASE RATE.

	Typhoid Fever	Scarlet Fever	Diphtheria
Hospital Rate ...	23%	3.0%	6.3%
Home Rate	37%	4.0%	14.5%

Particulars as to the number of patients treated in the hospital, the cost of maintenance, and the various items which go to make the total amount, are fully set forth in the various statements contained in Table C, which also admits of a comparison being made between the past and the previous four years. In order to avoid taking up too much space the figures given do not deal with a longer period than the past five years.

TABLE C.

MAINTENANCE, 1914, AND PREVIOUS YEARS.

	£	s.	d.	
Cost of Food (Patients and Staff)	788	12	5	Year 1914
,, ,, ,, ,, ,,	715	5	0	,, 1913
,, ,, ,, ,, ,,	679	17	0	,, 1912
,, ,, ,, ,, ,,	691	7	7	,, 1911
,, ,, ,, ,, ,,	671	16	3	,, 1910
*Cost of Drugs, Dressings, &c.	122	4	2	Year 1914
,, ,, ,, ,, ,,	91	13	11	,, 1913
,, ,, ,, ,, ,,	93	13	9	,, 1912
,, ,, ,, ,, ,,	99	10	0	,, 1911
,, ,, ,, ,, ,,	46	13	8	,, 1910
Cost of Coal and Slack	248	2	10	Year 1914
,, ,, ,,	238	4	5	,, 1913
,, ,, ,,	213	3	10	,, 1912
,, ,, ,,	230	8	11	,, 1911
,, ,, ,,	222	3	0	,, 1910
Salaries	547	1	2	Year 1914
,,	489	17	10	,, 1913
,,	476	14	5	,, 1912
,,	492	15	5	,, 1911
,,	483	5	0	,, 1910

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* Includes £50 12s. 1d. paid for Anti-Diphtheria Serum, of which, in keeping with the provisions of the Diphtheria Anti-Toxin Order, 1910, Serum to the value of £25 19s. 9d. was supplied to Medical Practitioners in the Borough.

Cost of Food at the rate of :—

6¾d. per day per person,	3/11¼ per week		10	4	9	Year	1914
6¼d. ,, ,,	3/7¾ ,, ,,		9	9	8	,,	1913
6¼d. ,, ,,	3/7¾ ,, ,,		9	9	8	,,	1912
7d. ,, ,,	4/1 ,, ,,		10	12	4	,,	1911
9¼d. ,, ,,	5/4¾ ,, ,,		14	0	7	,,	1910

Average Number of Patients per day, 55.

Average Number of days in Hospital, per patient, 45.3.

Average daily cost (based on total expenditure), £7 15s. 4d.

Average cost per patient (based on total expenditure), £6 7s. 5d.

Number of Patients,	1914	445
,, ,, ,,	1913	522
,, ,, ,,	1912	422
,, ,, ,,	1911	439
,, ,, ,,	1910	303

TOTAL EXPENDITURE, 1914.

	£	s.	d.
January	281	14	4*
February	208	5	10
March	213	6	1
April	226	8	10
May	205	11	9
June	160	12	7
July	398	14	7†
August September	418	4	8
October	243	9	10
November	269	1	4‡
December	209	14	7§
	£2835	4	4

* Includes £30 2s. 10d. for Property Tax.

† Includes £220 16s. 8d. for Borough and Poor Rates.

‡ Includes £56 6s. 4d. for Ground Rent; also £50 (part payment) for Painting.

§ Includes £50 (part payment) for painting.

	£	s.	d.
Total Expenditure, Year 1913	2368	5	7
,, ,, ,, 1912	2481	14	9
,, ,, ,, 1911	2414	16	11
,, ,, ,, 1910	2181	8	10

SUMS PAID TO OTHER DEPARTMENTS OF THE CORPORATION DURING THE YEAR 1914.

	£	s.	d.
Rates Department, for Rates	220	16	8
Water Department, for Water	74	7	3
Tramways Department, for Current and Lamps	88	18	9
Estate Committee, for Ground Rent	56	6	4
	£440	9	0

	£	s.	d.
Sums paid to other Departments, 1913	362	9	1
,, ,, ,, ,, 1912	384	5	8
,, ,, ,, ,, 1911	372	5	5
,, ,, ,, ,, 1910	378	14	5

Although the number of patients 455, was less than that for 1913, the average number treated on each day, and the average duration per patient in hospital were both higher, and these facts combined with the increased food prices account in a great measure for the rise in the total expenditure. Taking the last named condition into consideration, the cost of maintenance per person—viz. : 6¾d. per day, 3s. 11¼d. per week, or £10 4s. 9d. per year—speaks well for economy in administration. The increased cost of Drugs and Dressings was due to the rise in prices following upon the declaration of War, a rise which promises to continue for some time.

The supply to Medical Practitioners in the town of Anti-Diphtheritic Serum has been continued, and reference has already been made to the good effects which have resulted. An item of expenditure out of the common has been the part payment for the painting and repair of the interior of the wards, a necessary procedure since nothing had been done in this direction since 1907, the date of their erection.

Further information relating to points connected with the maintenance and expenditure of the Hospital will be found under the various statements of Table C.

The Hospital continues to present an increasingly attractive appearance. Despite the proximity to town the trees and shrubs in the grounds have thriven well, and the plain brickwork of the administrative block is now completely covered with a luxuriant growth of creeper.

Two Nurses contracted Scarlet Fever in the discharge of their duties, and though in one case the illness was followed and complicated by Diphtheria, both patients, I am glad to say, made satisfactory recoveries.

I take this opportunity of again thanking all those kind donors of Christmas gifts, which contributed so much to the pleasure of the children, and helped them to forget their temporary separation from relatives and home.

H. O. PILKINGTON,

MEDICAL SUPERINTENDENT.

September, 1915.

PORT SANITARY.

The work at the Port during the past year has been of the usual character, and there has been nothing exceptional or calling for special comment. During the latter part of the year the war exercised a certain restriction upon the trade, a condition which—owing to the scarcity of labour—has been of an increasing nature.

The number of steamships and sailing vessels inspected was respectively 1126 and 23, the proportion of the latter being a constantly decreasing one. Defects to the number of 214 were found upon 142 of the vessels examined. These as a rule were not serious, or of a nature requiring structural alterations, but were rather the result of a want of care and attention to cleanliness, and as such could be easily remedied by the crew, the persons most interested, and most likely to benefit by the improved sanitation. Without formal notice, but upon verbal representation by the Inspector, attention was at once given to the defects found, and in most instances matters had been remedied before the vessels departed from the dock.

A large quantity of articles of food, including tinned goods, were inspected, although the great bulk of them had already undergone examination at the ports from which they had been transhipped. A number of bags of potatoes, the contents of which were in part soft and decayed, were emptied out and overhauled, the unsound portion being either destroyed, or, if not much affected, used for the feeding of pigs or poultry.

Sugar to the amount of six tons, which had been injured by contact with salt water, was rejected and returned to the owners for the purpose of re-manufacture.

Owing to the outbreak of Foot and Mouth Disease the trade in Irish Cattle was discontinued throughout the year.

Not a single instance of Infectious Disease came under observation. Such cases of illness as were reported, or otherwise discovered on board newly arrived vessels, were advised to obtain medical assistance, in all instances with a satisfactory result.

The constant warfare waged by various means against the rats would appear to have been successful, at any rate there has been no apparent increase in their numbers; nor have the bodies of rats which have died from natural causes at any time been discovered.

Table No. 17 gives details as to the Port Sanitary work during the year.

H. O. PILKINGTON,
PORT MEDICAL OFFICER.

September, 1915.

TABLE No. 1.

Number and Causes of Deaths at different Ages, for the Year 1914.

Cause of Death.	Under 1 Year.	1 to 2	2 to 5.	5 to 15	15 to 25	25 to 45.	45 to 65	65 and over.	Total.	Corresponding year, 1913.	Corresponding year, 1912.	Corresponding year 1911.	Average for the past six years.
Small Pox	...	...	...	...	...	...	...	...	...	...	...	...	...
Fever	...	...	1	2	4	2	...	1	10	10	8	19	13·00
Scarlatina	2	3	18	17	1	1	...	...	42	29	36	19	23·50
Measles	10	18	14	2	1	...	...	...	45	65	90	5	41·67
Diarrhœa	52	6	...	...	...	...	...	...	58	92	24	136	71·83
Whooping Cough	15	5	3	...	...	...	...	...	23	5	42	20	26·67
Diphtheria	2	1	11	9	...	...	1	...	24	31	39	32	26·00
Croup	1	...	1	...	...	...	...	...	2	4	7	6	3·83
Consumption	...	...	1	10	20	31	22	4	88	108	96	111	101·17
Bronchitis	37	5	3	2	..	6	37	67	157	236	200	199	202·83
Inflammation of Lungs	30	20	6	3	2	18	19	20	118	119	122	117	113·00
Teething, Premature Births and Debility.	241	23	15	8	...	.	...	...	287	328	259	324	313·83
Old Age	...	...	...	...	...	...	...	122	122	118	111	94	118·33
Violence, &c.	3	2	2	5	7	13	21	9	62	56	62	56	59·66
Other Diseases	2	...	6	24	28	114	282	187	643	670	701	679	660·33
Total	395	83	81	82	63	185	382	410	1681	1871	1797	1817	1775·65

TABLE No. 2.

Number and Causes of Deaths in each Month of the Year 1914.

Cause of Death.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Small Pox	...	...	...	...	...	...	...	...	...	...	...	...	...
Fever	2	1	...	...	1	1	...	2	1	...	1	1	10
Scarlatina	3	3	6	4	1	...	2	1	4	5	4	9	42
Measles	...	...	...	...	4	3	7	2	4	4	10	11	45
Diarrhœa	...	...	1	...	...	1	2	4	45	5	...	...	58
Whooping Cough	...	...	1	1	3	4	2	2	5	2	1	2	23
Diphtheria	2	3	4	1	1	1	2	1	...	4	1	4	24
Croup	...	...	...	...	...	...	...	...	...	1	1	...	2
Consumption	6	5	9	11	7	8	5	7	6	5	9	10	88
Bronchitis	26	13	19	13	10	5	9	10	14	7	12	19	157
Inflammation of Lungs	8	14	9	14	11	5	12	10	7	7	10	11	118
Teething, Premature Births, and Debility	20	21	15	24	27	15	41	17	41	21	20	25	287
Old Age	10	9	7	14	11	10	3	10	8	10	15	15	122
Violence, &c.	4	6	6	7	4	3	5	4	8	4	4	7	62
Other Diseases	64	48	66	68	43	37	72	39	49	43	46	68	643
Total	145	123	143	157	123	93	162	109	192	118	134	182	1681

TABLE No. 3.

Number and Causes of Deaths in each Ward for the Year 1914.

Wards.	Small Pox.	Fever.	Scarlatina.	Measles.	Diarrhœa.	Whooping Cough.	Diphtheria.	Croup.	Consumption.	Bronchitis.	Inflammation of Lungs	Teething, Premature Births, & Debility.	Old Age.	Violence, &c.	Other Diseases.	Total Deaths.	Rate per 1,000 per ann.	Total Births.	Rate per 1,000 per ann.	Population.
St. John's Ward.....	...	3	5	6	11	3	...	...	14	20	15	23	11	5	42	158	13·30	301	25·42	11880
Avenham Ward......	...	1	2	1	...	2	...	...	4	9	9	14	13	3	39	97	13·42	102	14·11	7230
Christ Church Ward	...	...	1	14	8	6	...	...	1	11	15	26	6	5	54	147	17·26	243	28·53	8518
Ashton Ward.........	...	...	2	...	2	...	1	...	5	9	6	11	7	7	42	92	10·51	173	19·08	8749
Maudland Ward......	...	1	2	4	4	4	1	...	12	10	13	21	12	4	46	134	14·15	202	21·32	9472
St. Peter's Ward...	...	1	6	1	12	2	1	1	9	17	7	38	13	4	43	155	13·21	307	26·16	11734
Moor Brook Ward..	...	1	1	1	4	2	...	...	10	12	7	13	6	2	53	112	12·33	172	19·00	9085
Park Ward............	...	3	6	8	7	1	5	1	11	19	11	52	22	2	78	226	15·30	389	26·32	14783
Trinity Ward	...	...	6	8	4	1	5	...	7	19	5	25	10	3	53	146	14·26	286	28·00	10240
Deepdale Ward......	...	...	5	1	2	1	2	...	6	15	9	26	12	1	62	142	13·70	259	25·00	10370
Ribbleton Ward.....	...	...	2	1	3	1	4	...	5	8	7	20	2	1	35	89	9·91	215	24·00	8979
Fishwick Ward.......	...	...	3	...	1	...	5	...	3	6	3	10	8	2	31	72	9·63	165	22·08	7474
Goal, Infirmary, &c	...	...	1	...	...	...	...	...	1	2	11	8	...	23	65	111	...	4	...	...
Total............	...	10	42	45	58	23	24	2	88	157	118	287	122	62	643	1681	14·18	2818	23·78	118514

Death Rate per annum, per 1,000 of Population for the year .... 14·18
Do. Do. Do. Average for 10 years .... 15·75
Infantile Mortality (Deaths under one year per 1,000 Births) for the year 140
Do. Do. Do. Average for 10 years 155
Per centage of Deaths under one year to total deaths for the Year .... 23·50
Do. Do. Do. Average for 10 years .... 25·02

TABLE No. 4.

Number of Deaths in each Ward during each Month of 1914.

Wards.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
St. John's Ward..................	9	6	8	11	13	12	22	15	26	7	11	18	158
Avenham Ward..................	13	8	13	12	5	8	4	3	11	7	8	5	97
Christ Church Ward............	15	11	7	11	12	9	13	14	18	7	10	20	147
Ashton Ward......................	6	4	6	9	4	3	12	9	9	7	9	14	92
Maudland Ward..................	10	3	13	12	16	6	17	10	15	7	9	16	134
St. Peter's Ward................	13	13	11	14	11	12	15	8	18	9	11	20	155
Moor Brook Ward..............	17	7	13	15	8	2	10	4	9	12	4	11	112
Park Ward.....................	18	16	17	18	14	10	19	13	34	18	23	26	226
Trinity Ward	9	15	16	11	11	6	13	11	11	12	17	14	146
Deepdale Ward.................	12	17	6	12	11	7	12	10	16	10	14	15	142
Ribbleton Ward..................	11	4	11	15	4	7	12	1	7	6	4	7	89
Fishwick Ward....................	5	10	11	6	4	2	4	5	8	7	4	6	72
Goal,Infirmary,&c................	7	9	11	11	10	9	9	6	10	9	10	10	111
Total	145	123	143	157	123	93	162	109	192	118	134	182	1681

TABLE 1A.

Vital Statistics of Whole District during 1914 and Previous Years.

Year.	Population estimated to Middle of each Year.	Births.			Total Deaths Registered in the District.		Transferable Deaths.		Nett Deaths belonging to the District.			
		Un-correc'd Number.	Nett.						Und'r 1 yr. of age		At all Ages.	
			Number.	Rate.	Number.	Rate.	of Non-resid'ts registered in the district	of Residents not regist'd in the district	Number	Rate per 1,000 Nett Births.	Number	Rate.
1909	118,519	–	3027	25.54	1721	14.52	52	173	416	137	1842	15.54
1910	119,253	–	2812	23.58	1758	14.74	42	213	438	156	1929	16.17
1911	117,216	–	2726	23.25	1817	15.50	45	212	473	173	1984	16.92
1912	117,630	2724	2753	23.40	1797	15.28	32	207	342	124	1972	16.76
1913	118,070	2864	2888	23.95	1871	15.55	39	211	462	160	2043	16.98
1914	118,514	2818	2841	23.97	1681	14.18	58	250	401	141	1873	15.80

Area of District in acres (Land and Inland Water) .... } 4,029

Total population at all ages 117,113
Number of inhabited houses 26,066
Average number of persons per house.. 4·49
} At Census of 1911.

TABLE 2A.

Cases of Infectious Diseases notified during the Year 1914.

NOTIFIABLE DISEASES.	NUMBER OF CASES NOTIFIED.								TOTAL CASES NOTIFIED IN EACH LOCALITY.												TOTAL CASES REMOVED TO HOSPITAL.
		At Ages—Years.																			
	At all Ages.	Under 1.	1 to 5.	5 to 15.	15 to 25.	25 to 45.	45 to 65.	65 and upwards.	St. John's Ward.	Avenham Ward.	Christ Church Ward.	Ashton Ward.	Maudland Ward.	St. Peter's Ward.	Moorbrook Ward.	Park Ward.	Trinity Ward.	Deepdale Ward.	Ribbleton Ward.	Fishwick Ward.	
Small Pox	...	...	...	...	...	...	...	...	...	...	...		...	...	...	.	...	...	...	...	...
Cholera (c) Plague (p)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Diphtheria (including Membranous Croup)	219	3	57	105	32	18	4	...	17	12	24	22	22	14	11	20	11	15	28	23	95
Erysipelas	110	1	1	4	9	46	41	8	8	3	13	8	10	6	3	20	13	8	7	11	...
Scarlet Fever	1137	9	334	722	58	13	1	.	120	45	57	101	69	88	72	143	86	123	134	99	334
Typhus Fever	...	...	...	.	...	...	...	...	...	...	...	.	...	...	...		...	...	...	...	..
Enteric Fever	45	..	3	11	13	14	3	1	11	1	4	6	6	3	3	6	2	...	2	1	26
Relapsing Fever Continued Fever	...	...	...	..	...	...	...	...	.	...	...	...	...	...	...	...	..	...	...	...	...
Puerperal Fever	7	...	..	...	2	5	...	...	1	...	1	...	...	...	...	1	...	2	2	...	...
Cerebro-spinal Meningitis	...	...	...	...	...	...	...	...	.	..	...	...	...	...	...	...	...	...	...	...	...
Poliomyelitis	...	...	...	...	..	...	...	..	...	.	...	...	...	..	...	...	...	...	...	...	...
Ophthalmia Neonatorum	16	16	...	...	...	...	...	...	3	1	2	...	...	1	1	...	7	...	1	...	...
Pulmonary Tuberculosis	291	2	5	24	70	143	43	4	39	15	15	14	33	30	23	45	28	14	22	13	68
Other forms of Tuberculosis	29	1	2	8	10	6	2	...	7	...	2	1	1	5	1	7	1	1	3	...	1
Totals	1854	32	402	874	194	245	94	13	206	77	118	152	141	147	114	242	148	163	199	147	524

Isolation Hospital—{ Preston Borough Isolation Hospital,
Deepdale Road.

TABLE 3A.

Causes of, and Ages at, Death during the Year 1914.

CAUSES OF DEATH.	Nett Deaths at the subjoined ages of "Residents" whether occurring within or without the District.									Total Deaths whether of "Residents" or "non-Residents" in Institutions in the District.
	All Ages.	Under 1 year.	1 and under 2.	2 and under 5.	5 and under 15.	15 and under 25.	25 and under 45.	45 and under 65.	65 and up-wards.	
All Causes:—										
Certified	1827	391	91	84	76	72	208	436	469	...
Uncertified	46	10	1	...	2	...	7	10	16	...
Enteric Fever	10	...	...	1	2	4	2	...	1	3
Small-pox	...	...	...	...	...	...	...	...	...	...
Measles	45	10	18	14	2	1	...	...	...	...
Scarlet Fever	42	2	3	18	17	1	1	...	...	10
Whooping Cough	23	15	5	3	...	...	...	...	...	...
Diphtheria and Membranous Croup	25	2	1	11	9	1	...	1	...	6
Influenza	20	...	...	...	...	2	8	6	4	...
Erysipelas	2	...	...	...	...	...	...	1	1	...
Phthisis (Pulmonary Tuberculosis)	109	...	...	1	10	22	39	32	5	1
Tuberculous Meningitis	12	2	1	2	5	...	2	...	...	1
Other Tuberculous Diseases	29	10	2	6	3	1	2	4	1	3
Cancer, Malignant Disease	137	...	...	...	...	1	13	74	49	11
Rheumatic Fever	4	...	...	...	...	...	1	3	...	...
Meningitis	13	4	1	3	3	1	...	...	1	1
Organic Heart Disease	160	...	...	1	3	7	27	62	60	4
Bronchitis	180	38	6	3	1	...	6	43	83	2
Pneumonia (all forms)	127	30	20	6	3	4	20	22	22	10
Other Diseases of Respiratory Organs	14	4	...	...	...	1	4	2	3	3
Diarrhœa and Enteritis	67	55	8	1	...	...	1	...	2	...
Appendicitis and Typhlitis	2	...	...	...	...	...	1	1	...	8
Cirrhosis of Liver	16	...	...	...	...	...	1	13	2	...
Alcoholism	6	...	...	...	...	...	...	5	1	...
Nephritis and Bright's Disease	36	2	...	...	1	3	5	18	7	3
Puerperal Fever	2	...	...	...	...	1	1	...	...	1
Diseases and Accidents of Pregnancy and Parturition	20	...	...	...	...	1	19	...	...	1
Congenital Debility and Malformation, including Premature Birth	141	138	3	...	...	...	...	...	...	2
Violent Deaths, excluding Suicide	51	5	3	2	6	5	10	14	6	23
Suicide	15	...	...	...	...	1	5	8	1	...
Other Defined Diseases	530	80	20	11	12	14	39	126	228	37
Diseases ill-defined or Unknown	35	4	1	1	1	1	8	11	8	1
TOTALS	1873	401	92	84	78	72	215	446	485	131

TABLE 4A.

Nett Deaths from stated Causes at various Ages under One Year of age during the Year 1914.

CAUSE OF DEATH.	Under 1 Week.	1 - 2 Weeks.	2 - 3 Weeks.	3 - 4 Weeks.	Total under 1 Month.	1 - 3 Months.	3 - 6 Months.	6 - 9 Months.	9 - 12 Months.	Total Deaths under One Year.
All Causes:—										
Certified	71	14	21	7	113	88	79	65	46	391
Uncertified	4	...	...	...	4	1	2	1	2	10
Small Pox	...	...	...	...	...	...	...	...	...	...
Chicken Pox	...	...	...	...	...	...	...	...	...	...
Measles	...	...	...	...	...	...	1	4	5	10
Scarlet Fever	...	...	...	...	...	...	...	...	2	2
Whooping Cough	...	...	...	...	...	1	4	7	3	15
Diphtheria and Croup	...	...	...	...	...	...	...	...	2	2
Erysipelas	...	...	...	...	...	...	...	...	...	...
Tuberculous Meningitis	...	...	...	...	...	...	...	1	1	2
Abdominal Tuberculosis	...	...	...	...	...	3	2	3	1	9
Other Tuberculous Diseases	...	...	...	...	...	...	...	2	...	2
Meningitis (not Tuberculous)	...	...	...	...	...	1	2	...	1	4
Convulsions	9	...	4	1	14	9	6	1	5	35
Laryngitis	...	...	...	...	...	...	...	2	...	2
Bronchitis	...	2	1	...	3	8	13	10	4	38
Pneumonia (all forms)	...	1	1	1	3	7	7	5	8	30
Diarrhœa	1	...	1	1	3	12	19	11	7	52
Enteritis	...	...	...	..	...	1	...	...	3	4
Gastritis	...	...	...	...	...	...	...	...	1	1
Syphilis	...	...	...	...	...	1	...	...	...	1
Rickets	...	...	...	...	...	...	...	...	...	...
Suffocation, overlying	...	...	...	..	...	1	1	...	...	2
Injury at Birth	...	...	...	...	...	...	...	...	...	...
Atelectasis	5	...	...	...	5	...	...	...	...	5
Congenital Malformations	8	3	1	...	12	3	...	...	...	15
Premature Birth	41	4	5	1	51	8	2	...	1	62
Atrophy, Debility and Marasmus	9	3	5	2	19	23	12	5	1	60
Other causes	2	1	3	1	7	11	12	15	3	48
Total	75	14	21	7	117	89	81	66	48	401

Nett Births in the Year, Legitimate ...	2,841	Nett Deaths in Year of Legitimate Infants ...	376
„ Illegitimate ...	136	„ „ Illegitimate „ ...	25

TABLE No. 5.

Birth Rate, Death Rate, and Analysis of the Zymotic Death Rate in 39 of the largest English Towns, for the 52 weeks ended 2nd January, 1914.

Compiled from the Registrar-General's Returns.

NAME OF TOWN.	Estimated Population. 1914.	Birth Rate.	Recorded Death Rate.	Enteric Fever.	Small Pox.	Measles.	Scarlet Fever.	Wh'ping Cough.	Diphtheria.	Diarrhœa & Enteritis under 2years	Deaths under 1 year to 1,000 Births.
97 TOWNS.	...	24·8	14.6	0.04	0.00	0.35	0.09	0.25	0.16	25.85	114
London	4,516,612	24.7	14.5	0.03	0.00	0.31	0.07	0.21	0.16	27.34	103
Croydon	181,956	22.0	10.9	0.03	0.00	0.07	0.02	0.13	0.09	15.95	81
West Ham	296,570	30.2	14.7	0.04	0.00	0.44	0.04	0.38	0.17	26.37	106
Brighton	133,936	17.6	13.3	0.01	0.00	0.11	0.06	0.07	0.09	13.82	83
Portsmouth	245,827	23.3	12.5	0.12	0.00	0.16	0.02	0.20	0.32	11.92	85
Norwich	124,107	20.3	13.7	0.04	0.00	0.11	0.07	0.07	0.24	24.15	112
Plymouth	113,559	23.4	17.0	0.04	0.00	0.34	0.02	0.34	0.24	23.11	126
Bristol	363,312	21.4	13.3	0.02	0.00	0.26	0.06	0.19	0.10	15.84	100
Wolverhampton	95,725	27.1	15.5	0.02	0.00	0.11	0.05	0.18	0.19	29.31	114
Birmingham ...	868,430	26.9	14.9	0.02	0.00	0.36	0.16	0.35	0.30	27.15	122
Leicester	232,664	21.9	13.9	0.02	0.00	0.44	0.02	0.32	0.07	21.51	120
Nottingham....	266,918	23.2	15.2	0.05	0.00	0.30	0.05	0.24	0.14	28.22	145
Derby..........	126,389	23.9	12.8	0.01	0.00	0.15	0.03	0.18	0.10	14.51	93
Birkenhead.....	137,710	27.5	15.0	0.03	0.00	0.48	0.04	0.35	0.11	32.43	121
Liverpool	767,992	30.2	19.4	0.06	0.00	0.68	0.16	0.33	0.15	40.63	139
Bolton	185,247	22.1	14·5	0.06	0.00	0.34	0.02	0.28	0.23	41.43	118
Manchester	738,538	25.7	16.6	0.05	0.00	0.41	0.22	0.38	0.14	26.94	127
Salford	234,975	26.6	16.5	0.08	0.00	0.47	0.34	0.33	0.16	26.22	126
Oldham	151,044	23.1	17.7	0.03	0.00	1.14	0.32	0.38	0.27	23.07	139
Burnley	110,040	23.7	16.1	0.04	0.00	1.14	0.08	0.42	0.14	33.20	157
Blackburn	134,387	20.9	14.6	0.05	0.00	0.16	0.08	0.08	0.05	17.79	116
Preston.........	**118,514**	**23.8**	**15.7**	**0.09**	**0.00**	**0.40**	**0.36**	**0.22**	**0.22**	**32.69**	**142**
Huddersfield ...	112,265	18.2	14.6	0.06	0.00	0.44	0.03	0.20	0.03	9.04	113
Halifax........	100,373	17.8	14.8	0.13	0.00	0.09	0.04	0.20	0.13	15.48	102
Bradford	291,482	19.6	15.6	0.07	0.00	0.40	0.02	0.33	0.12	14.32	123
Leeds..........	459,260	23.5	14.8	0.04	0.00	0.47	0.06	0.30	0.12	26.07	123
Sheffield	476,971	27.3	16.2	0.06	0.00	0.78	0.18	0.48	0.14	31.28	132
Hull	291,118	27.3	15.2	0.15	0.00	0.34	0.02	0.18	0.18	30.70	120
Sunderland	152,927	32.4	16.9	0.05	0.00	0.12	0.16	0.40	0.17	39.28	134
Gateshead......	119,362	31.4	18.0	0.07	0.00	0.51	0.14	0.38	0.06	45.22	148
Newcastle	273,415	27.7	16.9	0.06	0.00	0.79	0.16	0.28	0.09	31.13	137
Cardiff	188,495	25.5	13.9	0.04	0.00	0.33	0.11	0.40	0.22	19.24	110
Swansea	121,665	26.9	15.6	0.04	0.00	0.67	0.09	0.70	0.11	22.86	141
Warrington	74,923	29.8	15.9	0.11	0.00	0.43	0.32	0.38	0.16	24.72	112
St. Helens	100,775	33.0	16.7	0.04	0.00	0.29	0.05	0.25	0.08	27.98	138
Stockport......	126,040	21.6	13.7	0.05	0.00	0.19	0.05	0.04	0.08	29.16	124
Middlesbrough..	126,452	32.4	19.0	0.04	0.00	0.47	0.28	0.46	0.42	38.32	149
South Shields ..	111,357	31.6	17.3	0.15	0.00	0.28	0.21	0.49	0.14	29.86	135
Northampton ..	91,123	20.8	13.7	0.00	0.00	0.20	0.01	0.08	0.42	17.61	87

TABLE No. 6.

The estimated Population, Number of Births and Deaths, Rates per thousand, and natural increase within the Borough, for each Year since 1845.

Years.	Estimated Population.	No. of Deaths.	Death Rate per 1,000.	No. of Births.	Birth Rate per 1,000.	Natural Increase.
1845	58,360	1635	28.01	2293	39.29	558
1846	60,200	2189	36.36	2475	41.09	286
1847	62,050	2059	33.18	2268	36.59	209
1848	63,900	1550	24.26	2223	34.79	673
1849	65,750	1751	26.63	2403	36.55	652
1850	67,000	1745	25.81	2649	39.19	904
1851	69,450	2241	32.26	2803	40.36	562
1852	70,850	2284	32.23	2998	42.31	714
1853	72,250	2346	32.47	3072	42.51	726
1854	73,600	2013	27.35	3037	41.26	1024
1855	75,000	2557	34.10	3071	40.95	514
1856	76,400	2251	29.46	3151	41.24	900
1857	77,800	2131	27.39	3286	42.24	1155
1858	79,200	2545	32.13	3082	38.91	537
1859	80,600	2111	26.19	3399	42.17	1288
1860	82,000	2236	27.27	3381	41.23	1145
1861	82,985	2585	31.15	3626	43.69	1041
1862	83,231	2411	28.97	3522	42.32	1111
1863	83,477	2142	25.66	3388	40.57	1246
1864	83,686	2432	29.06	3422	40.89	990
1865	83,932	2708	32.26	3338	39.77	630
1866	84,178	2854	33.90	3535	41.99	681
1867	84,424	2608	30.89	3732	44.20	1124
1868	84,670	2798	33.04	3710	43.82	912
1869	84,916	2248	26.47	3434	40.44	1186
1870	85,162	2406	28.25	3486	40.93	1080
1871	85,427	2541	29.75	3438	40.24	897
1872	85,654	2294	26.78	3704	43.24	1410
1873	86,000	2899	33.71	3558	41.37	659
1874	86,000	2962	34.44	3582	41.65	620
1875	86,000	2581	30.01	3499	40.68	918
1876	86,600	2331	26.92	3623	41.84	1292
1877	87,000	2336	26.85	3601	41.39	1265
1878	87,300	2502	28.66	3697	42.35	1195
1879	87,600	2395	27.34	3403	38.83	1068
1880	88,000	2425	27.35	3475	39.49	1050
1881	96,524	2044	21.17	3489	36.14	1445
1882	97,656	2511	25.71	3785	38.76	1214
1883	98,564	2345	23.79	3576	36.28	1231
1884	99,481	2540	25.53	3745	37.64	1205
1885	100,406	2563	25.52	3868	38.52	1305
1886	101,340	2769	27.32	3961	39.08	1192
1887	102,283	2703	26.42	3870	37.83	1167
1888	103,234	2326	22.53	3823	37.03	1497
1889	104,194	2019	28.97	3912	37.63	902
1890	105,163	2726	25.92	3718	35.35	992
1891	107,864	2807	26.02	3830	35.50	1023
1892	109,038	2481	22.75	3686	33.80	1205
1893	110,225	2753	24.97	3809	34.55	1056
1894	111,425	2186	19.61	3545	31.81	1359
1895	112,638	2528	22.44	3702	32.95	1174
1896	113,864	2191	19.24	3673	32.25	1482
1897	115,103	2687	23.34	3687	32.03	1000
1898	116,356	2107	18.10	3559	30.58	1452
1899	117,622	2492	21.18	3492	29.68	1000
1900	118,902	2636	22.16	3410	28.67	774
1901	113,117	2213	19.56	3418	30.21	1205
1902	113,766	1998	17.56	3278	28.81	1280
1903	114,404	1955	17.08	3453	30.18	1498
1904	115,055	2091	17.83	3314	28.26	1223
1905	115,721	1906	16.47	3259	28.16	1353
1906	116,399	2065	17.74	3317	28.49	1252
1907	117,093	2003	17.10	3124	26.68	1121
1908	117,799	1975	16.45	3309	27.56	1334
1909	118,519	1721	14.52	3027	25.54	1306
1910	119,253	1758	14.74	2812	23.58	1054
1911	117,216	1817	15.50	2726	23.25	909
1912	117,630	1797	15.28	2724	23.16	927
1913	118,070	1871	15.55	2864	23.80	993
1914	118,514	1681	14.18	2818	23.78	1137

TABLE No. 7.

Per centage of Deaths from Zymotic Diseases to Sickness reported during the Year 1914.

Disease.	No. of Cases Reported.	No. of Deaths.	Per centage.
Small Pox	..	...	...
Typhus Fever	...	...	...
Typhoid Fever	45	10	22·22
Scarlet Fever	1137	42	3·69
Diphtheria	219	24	10·95
Puerperal Fever	7	2	28·60
Erysipelas	110	1	0·91

TABLE No. 8.

Meteorological Observations for the Year 1914.

Month.	Attached Thermometer.	Barometer.	Barometercorrected to 32 deg. Fahr.	Hygrometer		Temperature in Shade.		Earth Thermometer		Mean Daily Temperature.	Humidity Saturation=100.	Rainfall in inches.
				Dry Bulb.	Wet Bulb.	Maxi-mum	Mini-mum	One Foot.	Four Feet.			
January	39·1	29·949	30·067	39·9	38·5	43·1	36·1	...	43·5	39·5	91	2·69
February	43·4	29·474	29·579	43·9	42·2	48·7	40·0	...	44·0	44·3	87	2·48
March	42·1	29·348	29·479	43·0	41·1	46·9	38·1	...	43·9	42·5	89	3·29
April	48·9	29·966	30·053	51·2	47·1	55·6	43·2	...	45·2	49·4	74	1·51
May	53·5	29·980	30·057	53·9	49·7	56·9	46·3	...	48·1	51·6	74	2·02
June	59·3	29·980	30·038	60·1	54·3	64·7	51·4	...	51·2	58·0	66	1·22
July	62·5	29·817	29·866	62·8	58·3	68·1	55·5	...	55·8	61·8	77	4·70
August	62·2	29·897	29·946	63·3	58·5	68·6	55·0	...	56·5	61·8	72	1·77
September	56·7	29·999	30·064	58·4	54·5	62·5	50·9	...	56·5	56·7	76	3·84
October	50·9	29·665	29·749	51·8	49·8	55·3	47·2	...	53·0	51·2	88	1·88
November	43·9	29·724	29·828	45·4	43·9	48·9	40·4	...	49·4	44·6	89	4·52
December	40·6	29·343	29·456	41·6	40·3	44·8	37·6	...	44·8	41·2	90	6·00

TABLE No. 9.

SANITARY INSPECTORS.

Summary of Work done during the Year 1914.

	No. 1 District	No. 2 District.	No. 3 District.	No. 4 District.	Total.
Number of Complaints received	375	1210	345	630	2,560
Inspections of Dwelling Houses	3001	1740	2989	3194	10,924
,, Infected Houses	480	533	415	537	1,965
,, Lodging Houses	30	992	95	3116	4,233
,, Cellar Dwellings	...	...	59	48	107
,, Canal Boats	...	...	...	98	98
,, Vans and Tents	15	43	24	64	146
,, Schools	50	39	36	242	367
,, Cowsheds, Dairies and Milkshops...	210	73	140	262	685
,, Slaughter Houses	62	4	121	122	309
,, Markets	20	150	50	1599	1,819
,, Drains and Yards	2986	2055	3001	4280	12,322
Inspections under Housing and Town Planning Act	54	150	296	108	608
Re-Inspections	820	...	436	3393	4,649
Smoke Observations	64	111	86	81	342
Circular Letters sent	110	126	102	167	505
Notices served for Defective Slopstone Pipes	23	57	81	27	188
,, ,, Drains	128	133	156	231	648
,, ,, Spouts	26	34	111	46	217
,, ,, Water Closets	110	95	137	199	541
,, ,, Yard Pavement	28	126	9	18	181
,, ,, Cowsheds	1	...	...	...	1
,, Overcrowding	...	...	...	2	2
,, Limewashing	66	140	78	26	310
,, Manure Accumulation	8	6	13	10	37
,, Stagnant Water	1	...	...	...	1
,, General Nuisances	131	116	89	78	414
Notices served to Flag Yards	10	3	...	74	87
,, Flag Lobbies	...	16	...	11	27
Notice served to re-construct Middenstead	...	...	...	1	1
,, Supply Ashpails	82	62	22	30	196
Notices served to close houses unfit for habitation	...	...	...	102	102
House Drains Tested	136	92	67	103	398
School Drains Tested	...	...	...	...	...
Houses Disinfected	438	380	366	357	1,541
Schools Disinfected	4	16	22	8	50
Picture Palaces Disinfected	3	4	3	1	11
Number of Premises from which Bedding was Removed to Disinfecting Station	10	5	8	11	34
Number of Ashpails cleansed	...	...	...	...	1,793,048
,, Ashpits ,,	...	...	...	...	345
,, Animals removed	70	77	26	380	553
Fish Condemned and Destroyed	...	...	Wet Dry Shell	15552lbs. 600 ,, 472 ,,	16,624 lbs.

TABLE No. 9—Continued.

SANITARY INSPECTORS.

Summary of Work done during the Year 1914.

	No. 1 District	No. 2 District	No. 3 District	No. 4 District	Total
Number of Visits under Shops Act, 1912	155	233	210	378	976
Number of Prosecutions under Shops Act	...	1	...	...	1
Number of Shops at which verbal warning was given to exhibit Closing Notice	30	31	50	30	141
Delivering and Collecting Voting Papers re Drapers Closing Order............	55	200	72	147	474
Notices served for Re-registration of Common Lodging Houses	...	10	1	58	69

TABLE No. 5A.

Factories, Workshops, Workplaces and Home-Work.

1.—INSPECTION.

Premises.	Number of		
	Inspections.	Written Notices.	Prosecutions.
Factories (including Factory Laundries)	99	14	...
Workshops (including Workshop Laundries)	2095		...
Workplaces (other than Outworkers' premises included in Part 3 of this Report)	87		...
Total	2281	14	...

2.—DEFECTS FOUND.

Particulars.	Number of Defects.			Number of Prosecutions.
	Found.	Remedied.	Referred to H.M. Inspector.	
Nuisances under the Public Health Acts :—				
Want of Cleanliness	35	35		
Want of Ventilation	...	...		
Overcrowding	...	...		
Want of drainage of floors	22	22		
Other Nuisances	53	50		
Sanitary accommodation — insufficient	13	11		
Sanitary accommodation — unsuitable or defective	34	32		
Sanitary accommodation — not separate for sexes	...	...		
Offences under the Factory and Workshop Act :—				
Illegal occupation of underground bakehouse (s. 101)	...	...		
Breach of special Sanitary requirements for bakehouses (s.s. 97 to 100)	...	...		
Other offences (excluding offences relating to outwork which are included in Part 3 of this Report)	...	...		
Total	157	150		

3.—HOME WORK.

NATURE OF WORK.	OUTWORKERS' LISTS, SECTION 107.									OUTWORK IN UNWHOLESOME PREMISES, SECTION 108.			OUTWORK IN INFECTED PREMISES, SECTIONS 109, 110.		
	Lists received from Employers.						Notices served on Occupiers as to keeping or sending Lists.	Prosecutions.		Instances.	Notices served.	Prosecutions.	Instances.	Orders made (S. 110).	Prosecutions (Sections 109, 110).
	Twice in the Year.			Once in the Year.				Failing to keep or permit Inspection of Lists.	Failing to send Lists.						
	Lists	Outworkers.		Lists.	Outworkers.										
		Con-tractors.	Work-men.		Con-tractors.	Work-men.									
Wearing Apparel:—															
(1) making, &c.	33	2	60	1	...	1	...	...	...	...	...	...	...	...	...
(2) cleaning and washing	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total	66	4	120	1	...	1	...	...	...	...	...	...	...	...	...

4.—REGISTERED WORKSHOPS.

Workshops on the Register (s. 131) at the end of the year.	Number.
Factories	122
Workshops	899
Workplaces	85
Retail Bakehouses	160
Public do.	18
Total number of Workshops on Register	1284

5.—OTHER MATTERS.

Class.	Number.
Matters notified to H.M. Inspector of Factories:—	
Failure to affix Abstract of the Factory and Workshop Act (s. 133) 1901 ...	...
Action taken in matters referred by H.M. Inspector as remediable under the Public Health Acts, but not under the Factory and Workshop Act (s. 5). 1901 ... ... — Notified by H.M. Inspector	24
Reports (of action taken) sent to H.M. Inspector...	24
Other	133
Underground Bakehouses (s. 101):—	
Certificates granted during the year	...
In use at the end of the year	3

TABLE No. 10.

Summary of Work done under the Factory and Workshop Act, during the Year 1914.

	No. 1 District.	No. 2 District.	No. 3 District.	No. 4 District.	Total.
Number of Factories and Workshops on Register...	213	444	187	440	1284
,, Circular Letters sent re Out-workers...	...	46	2	38	86
,, Out-workers reported	2	51	4	60	117
Visits to Factories and Workshops	380	376	375	415	1546
,, Retail Bakehouses	95	240	72	139	546
,, Public Bakehouses	56	30	16	87	189
,, Home-workers premises	8	23	19	43	93
Drains tested	4	...	3	14	21
Defects found and Remedied :—					
Defective Drains	6	2	3	11	22
,, Slopstone Pipes	...	...	...	2	2
,, Spouts and Roofs	2	1	2	5	10
,, Water Closets	10	4	12	8	34
,, Yard pavement..	...	...	...	1	1
Limewashing required	15	5	5	10	35
General Nuisances	6	1	6	10	23
Insufficient W.C. accommodation for Females	1	...	10	2	13
,, ,, Males	...	...	...	...	...
No receptacle for Refuse	1	..	...	6	7
Abolish Ashpit	...	...	...	3	3
Manure Accumulations	4	...	...	3	7

TABLE No. 11.

List of Factories and Workshops on Register during the Year 1914.

		No. 1 District.	No. 2 District.	No. 3 District.	No. 4 District.	Total.
Bakers and Confectioners (Retail)		36	54	25	45	160
Bakers (Public)		2	7	4	5	18
Basket Makers		...	2	2	1	5
Beer Bottlers		3	2	1	6	12
Biscuit Makers		...	4	1	...	5
Boot, Shoe, and Clog Makers, Leather Curriers		24	58	26	32	140
Brass Founders		...	2	2	2	6
Breweries		1	4	2	3	10
Brush Makers		1	1	...	2	4
Cabinet Makers, Wood Carvers, Upholsterers		4	12	3	20	39
Coach Builders		1	5	...	5	11
Cotton Waste Cleaners and Dealers		...	1	...	2	3
Cotton Manufacturers		24	14	20	8	66
Coopers		1	3	1	1	6
Cycle Makers and Enamellers		10	11	4	7	32
Engravers		3	...	...	6	9
French Polishers		1	2	...	4	7
Ironfounders		4	5	5	4	18
Joiners, Builders, Wheelwrights, Wood Turners		12	26	6	16	60
Laundries		1	...	3	1	5
Marine Store Dealers		...	5	...	4	9
Milliners, Dressmakers, Underclothing Manufacturers		24	93	26	74	217
Picture Framers, Mount Cutters, Gilders		2	4	3	6	15
Photographers		4	4	1	3	12
Plumbers, Painters		10	13	8	20	51
Printers, Bookbinders		...	1	2	18	21
Restaurant Keepers		6	5	3	4	18
Rope and Twine Makers		2	...	2	...	4
Saddlers		1	6	1	4	12
Smiths, Black and White and Tinplate		5	9	5	27	46
Stone and Marble Masons		4	4	3	5	16
Sugar Boilers		4	1	1	...	6
Tailors		10	40	8	60	118
Watch Makers and Jewellers		8	14	8	10	40
Wire Workers		...	1	1	1	3
Offensive Trades	Fell Mongers	...	...	...	1	1
	Soap Boilers	...	...	1	3	4
	Fat and Tallow Melters	1	4	...	3	8
	Knacker Yards	1	...	...	...	1
	Gut Scrapers	...	4	...	...	4
	Tripe Boilers	1	2	...	1	4
Various		2	22	8	26	58

TABLE No. 12.

HEALTH VISITORS.

Summary of Work done during the Year 1914.

			District A.	District B.	District C.	District D.	Total.
Visits, Births.		Number of Houses visited	807	821	805	403	2836
		,, ,, Found Clean	751	782	795	393	2721
		,, ,, Found Dirty	56	39	10	10	115
	Children	Breast Fed	704	736	725	375	2540
		Partially Breast Fed ...	6	9	...	4	19
		Artificially Fed	97	76	80	24	277
	Occupation of Mother.	Home Permanently	511	292	449	291	1543
		Home Temporarily ...	288	489	344	111	1232
		Home and Work	8	40	12	1	61
Visits, House to House.		Number of Houses visited	321	398	571	464	1754
		,, ,, Found Clean	267	373	499	442	1581
		,, ,, Found Dirty	54	25	72	22	173
Visits, Infectious Disease.		Number of Houses visited	422	267	412	382	1483
		Measles	113	52	155	265	585
		Whooping Cough	133	52	112	73	370
		Chicken Pox	54	30	37	4	125
		Mumps, Ringworm, Eczema, Sore Head, &c.	122	133	108	40	403
Visits, Measles, Whooping Cough, Deaths.		Number of Houses visited	6	5	3	22	36
		,, ,, Found Clean	6	4	2	19	31
		,, ,, Found Dirty	...	1	1	3	5
Visits, Diarrhoea, Deaths.		Number of Houses visited	13	6	8	27	54
		,, ,, Found Clean	11	4	8	24	47
		,, ,, Found Dirty	2	2	...	3	7
	Children	Breast Fed	1	1	2	5	9
		Partially Breast Fed ...	2	...	...	3	5
		Artificially Fed	10	5	6	19	40
		Number of Re-visits	1306	1507	1764	691	5268
		,, Tube Bottles in use	38	47	44	57	186
		,, Cards distributed	807	803	805	403	2818
Visits. Re-visits.		Defects in School Children reported by Schools' Medical Officer	53	50	...	...	103
		,, ,, ...	291	156	264	...	711
Inspection of Heads.		Number of Schools visited......	6	1	4	...	11
		,, Children Inspected in School	1196	161	359	...	1716
		,, Children visited at Home ...	69	238	97	...	404
		,, Half-days in School	15	1	6	...	22

TABLE No. 13.

Return of Work done by Inspector of Food and Drugs, etc., during the Year 1914.

Food and Drugs, Samples purchased	304
Visits to Cow-sheds and Dairies	201
Visits to Slaughter-houses	3,738
Meat Condemned and Destroyed	84,627 lbs.

TABLE No. 14.

Contagious Diseases (Animals) Act, 1878.

Name of Disease	Situation of Premises	Date of Outbreak	Number of Diseased Animals	Number of Healthy Animals	Slaughtered by Owner	Slaughtered by Order of Board of Agriculture	Number of Visits
Parasitic Mange...	Old Vicarage ...	June 15	One	None	None	None	7

TABLE No. 15.

Substances formally purchased and submitted for Analysis during the Year 1914.

Name of Article.	No. of Samples	Result.
Beer	1	Genuine.
Bread	4	do.
Butter	63	do.
Cheese	11	do.
Chocolate	1	do.
Coffee	28	do.
Cream (Preserved)	1	do.
Ginger (Ground)	3	do.
Lard	52	do.
Milk	55	do.
Pepper (white)	6	do.
Pepper (cayenne)	1	do.
Rum	1	do.
Sweets	4	do.
Whisky	25	do.
	256	Total Genuine.
Cream	1	Fat 49 per cent. ; 0.3 per cent. Borates. Not labelled as required by Sale of Milk and Cream Regulations. Vendor cautioned.
Lard	1	Contained 3 per cent. of Beef or Mutton Stearin. Vendor cautioned.
Milk	1	Fat 2.10 per cent., other solids 8.62 per cent. = 10.72 per cent. total solids. Deprived of 30 per cent. of its Cream. Vendor summoned. Fined £1 and costs.
Milk	1	Fat 2.30 per cent., other solids 9.34 per cent. = 11.64 per cent. total solids. 23 per cent. of its Milk fat deficient. Vendor summoned. Case dismissed.
Milk	1	Fat 2.67 per cent., other solids 8.45 per cent. = 11.12 per cent. total solids. Deprived of 11 per cent. of its Cream. Vendor summoned. Fined £1 and costs.
Milk	1	Fat 2.99 per cent., other solids 6.65 per cent. = 9.64 per cent. total solids. 21 per cent. added water. Vendor summoned. Fined £1 and costs.

TABLE No. 15—Continued.

Substances formally purchased and submitted for Analysis during the Year 1914.

Name of Article	No. of Samples	Result
Milk	1	Fat 2.92 per cent.
Milk	1	Fat 3.94 per cent., other solids 8.19 per cent. = 12.13 per cent. total solids. Vendor cautioned.
Milk	1	Fat 5.70 per cent., other solids 7.92 per cent. = 13.62 per cent. total solids. 4 per cent. added Water. Vendor cautioned.
Milk	1	Non-fatty solids 8.20 per cent. Vendor cautioned.
Milk	1	Non-fatty solids 8.28 per cent. Vendor cautioned.
Milk	1	Non-fatty solids 8.34 per cent. Vendor cautioned.
Pepper (white)	1	Contained 12 per cent. black pepper husks. Vendor cautioned.
Whisky	1	27.2 degrees under proof, which is 2.2 degrees below the statutory limit. Vendor cautioned.
Whisky	1	30.4 degrees under proof, which is 5.4 degrees below the statutory limit. Vendor cautioned.
	15	Total non-genuine samples.
	271	Total formal samples.

TABLE No. 16.

Substances informally purchased and submitted for Analysis during the Year 1914.

Name of Article.	No. of Samples	Result.
Butter	11	Genuine.
Coffee	5	do.
*Cream (Preserved)	3	do. (For details see below.)
Lard	8	do.
Milk	3	do.
Whisky	1	do.
	31	Total Genuine Samples.
Cream (Preserved)	1	Fat 47 per cent. ; Borates—calculated as Boracic Acid = 0.31 per cent. ; Quantity of Borates grossly in excess of amount (0.04) stated on label.
Cream (Preserved)	1	Fat 49 per cent. ; Borates—cauculated as Boracic Acid = 0.24 per cent. Sample not labelled as required by the Sale of Milk and Cream Regulations.
	2	Total Non-Genuine samples.
	33	Total Informal samples.
*Cream (Preserved)	1	Fat 52 per cent. ; Boracic Acid 0.36 per cent.
*Cream (Preserved)	1	Fat 53 per cent. ; Boracic Acid 0.50 per cent.
*Cream (Preserved)	1	Fat 50.5 per cent. ; Boracic Acid 0.25 per cent.

TABLE No. 17.

Return of Port Sanitary Work for the Year 1914.

Steamships Inspected		1126
Sailing Vessels Inspected		23
Re-Inspections		168
Condition of Vessels Inspected	Good	1007
	Defective	142
Defects Remedied:—		
Forecastle Dirty		45
Do. Required painting		14
Do. Deck Leaking		5
Do. Ventilation and Light Defective		20
Foul and Defective Water Closets		52
Foul Water Casks and Tanks		3
Dirty Provision Lockers		69
Do. Bilges		3
Do. Chain Lockers under Forecastle		3

Public Health (Unsound Food) Regulations, 1908.

LIST OF ARTICLES INSPECTED.

Raisins
Currants
Figs
Prunes
Hams
Bacon
Lard
Lard Substitute
Flour
Oat Meal
Peas
Beans
Rice
Barley
Tapioca
Sugar
Potatoes
Nuts
Pig's Feet in Salt

Tinned Goods.

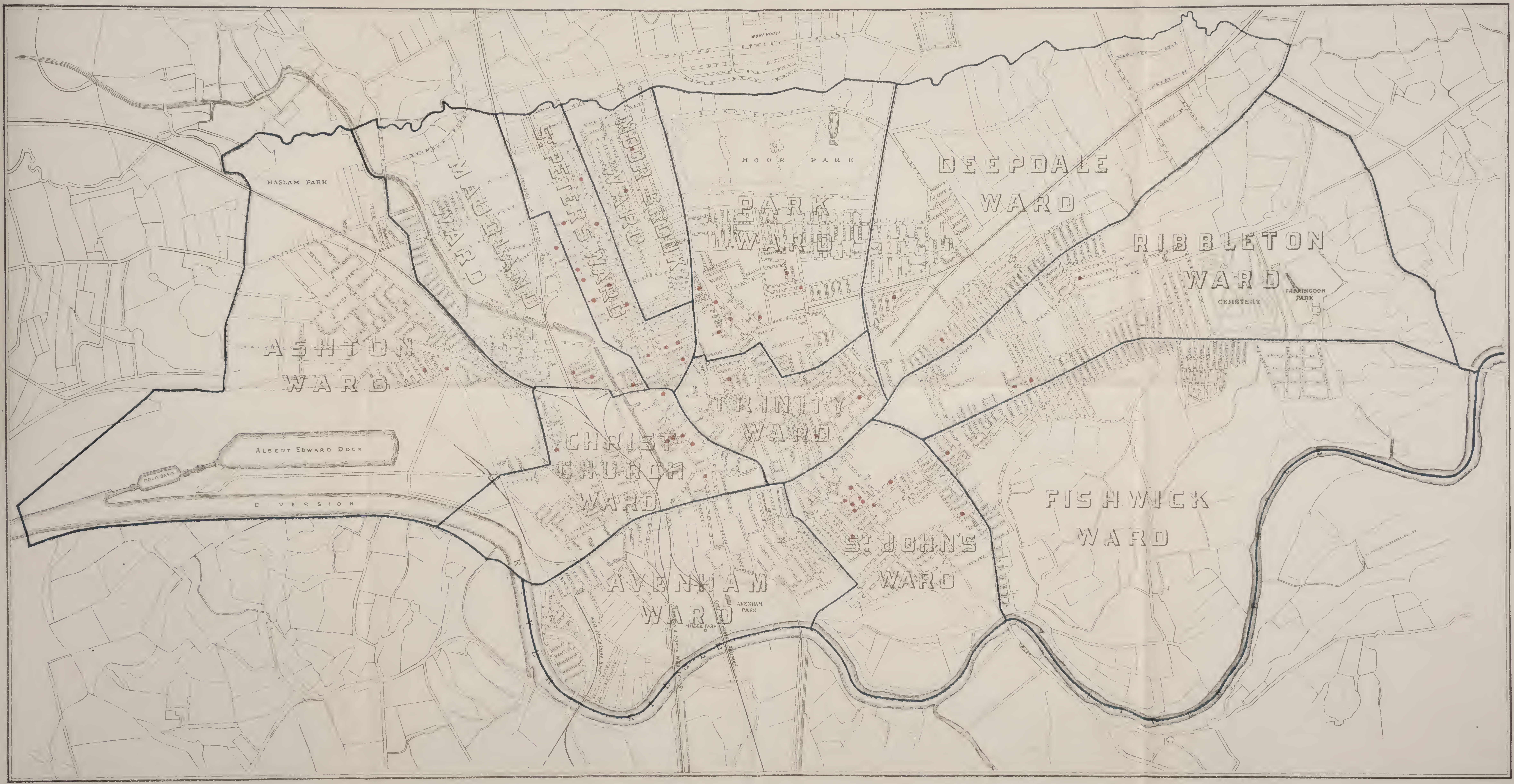
Salmon
Sardines
Beef
Mutton
Tongues
Peaches
Apples
Pears
Pineapple
Apricots
Tomatoes
Plums

Goods destroyed or rejected:—

Sugar, 6 tons rejected, sent back for re-manufacture.

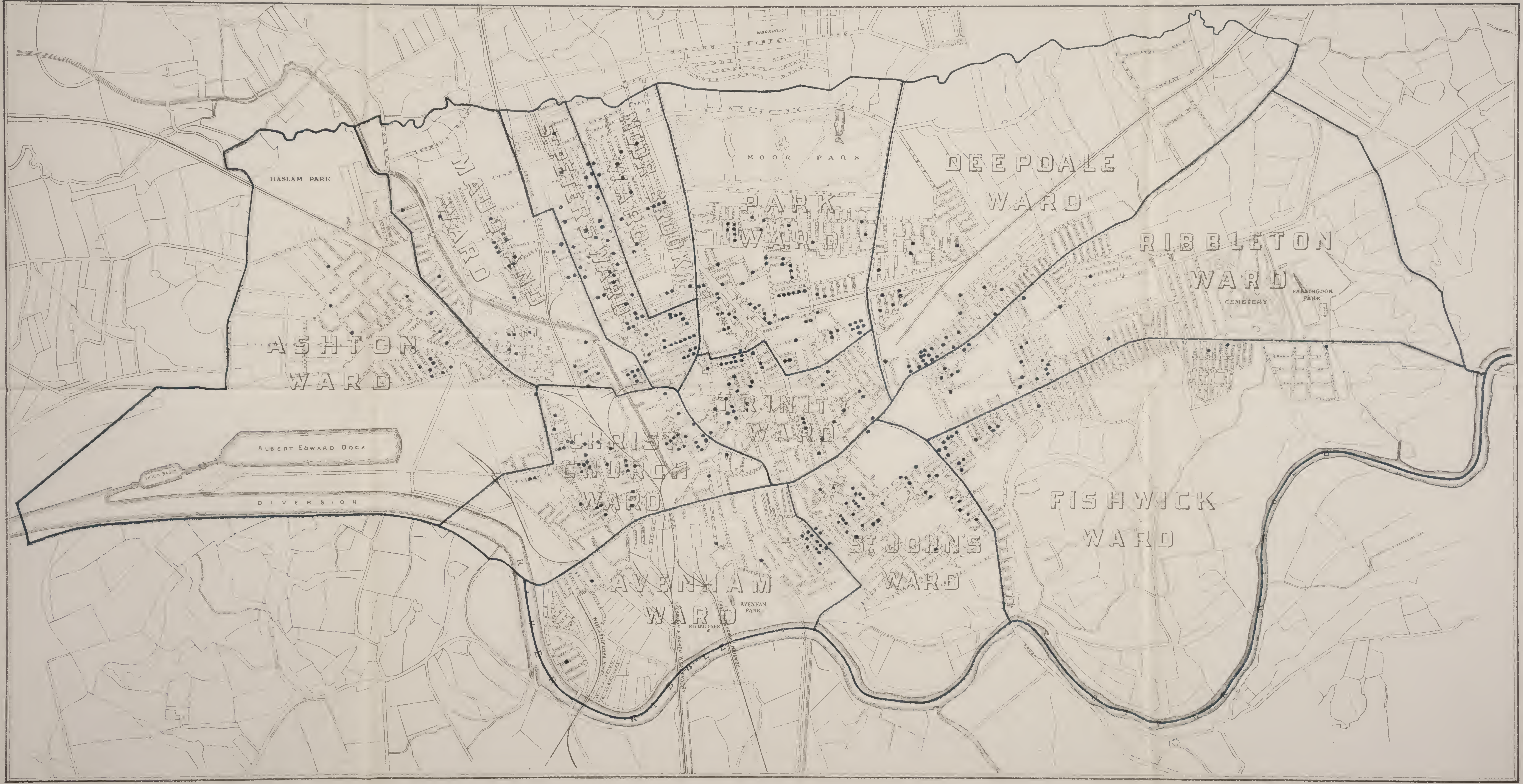
INFANTILE DIARRHŒA, 1914.

The Red Spots ● indicate Deaths from Diarrhœa under the age of One Year.



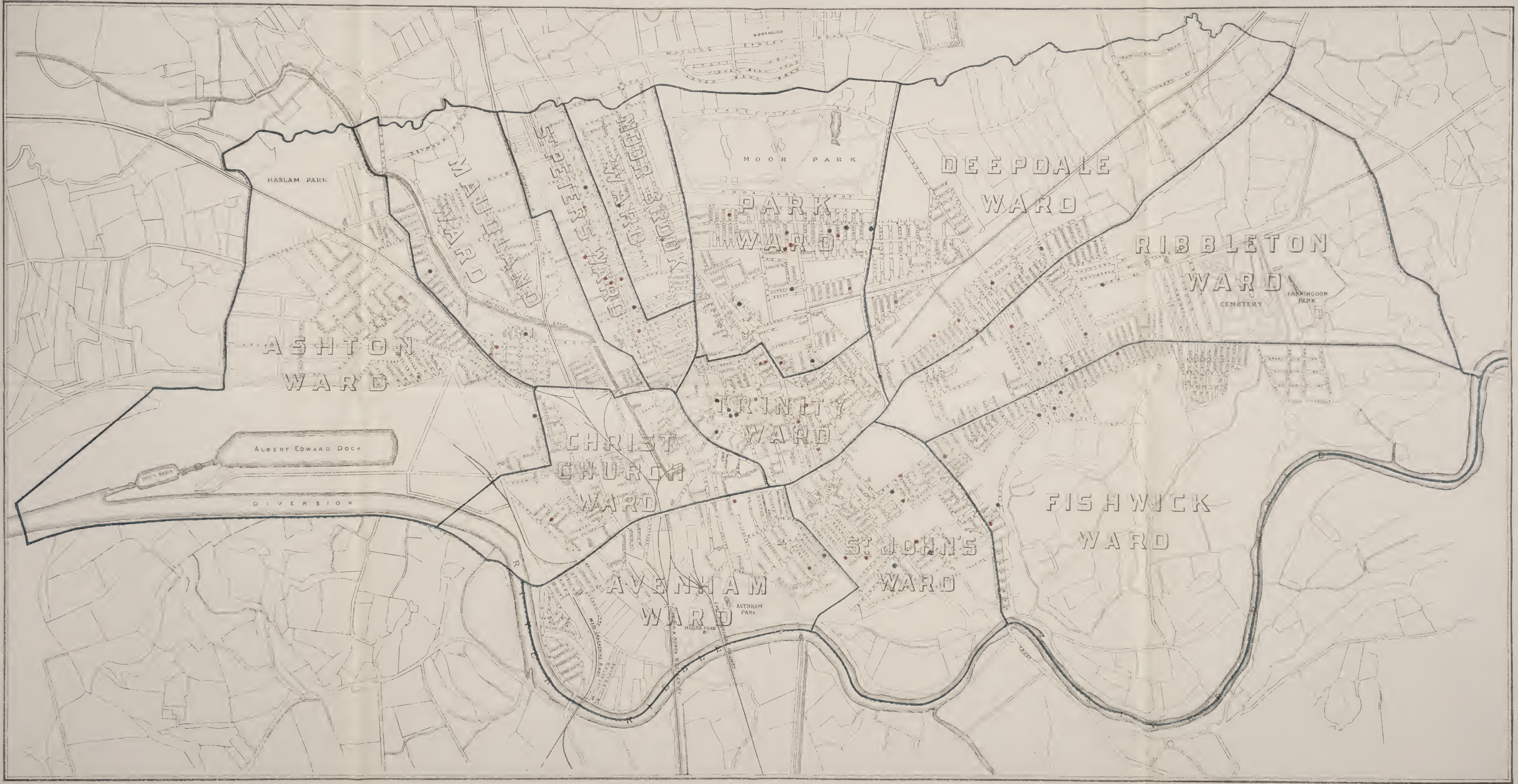
HEA

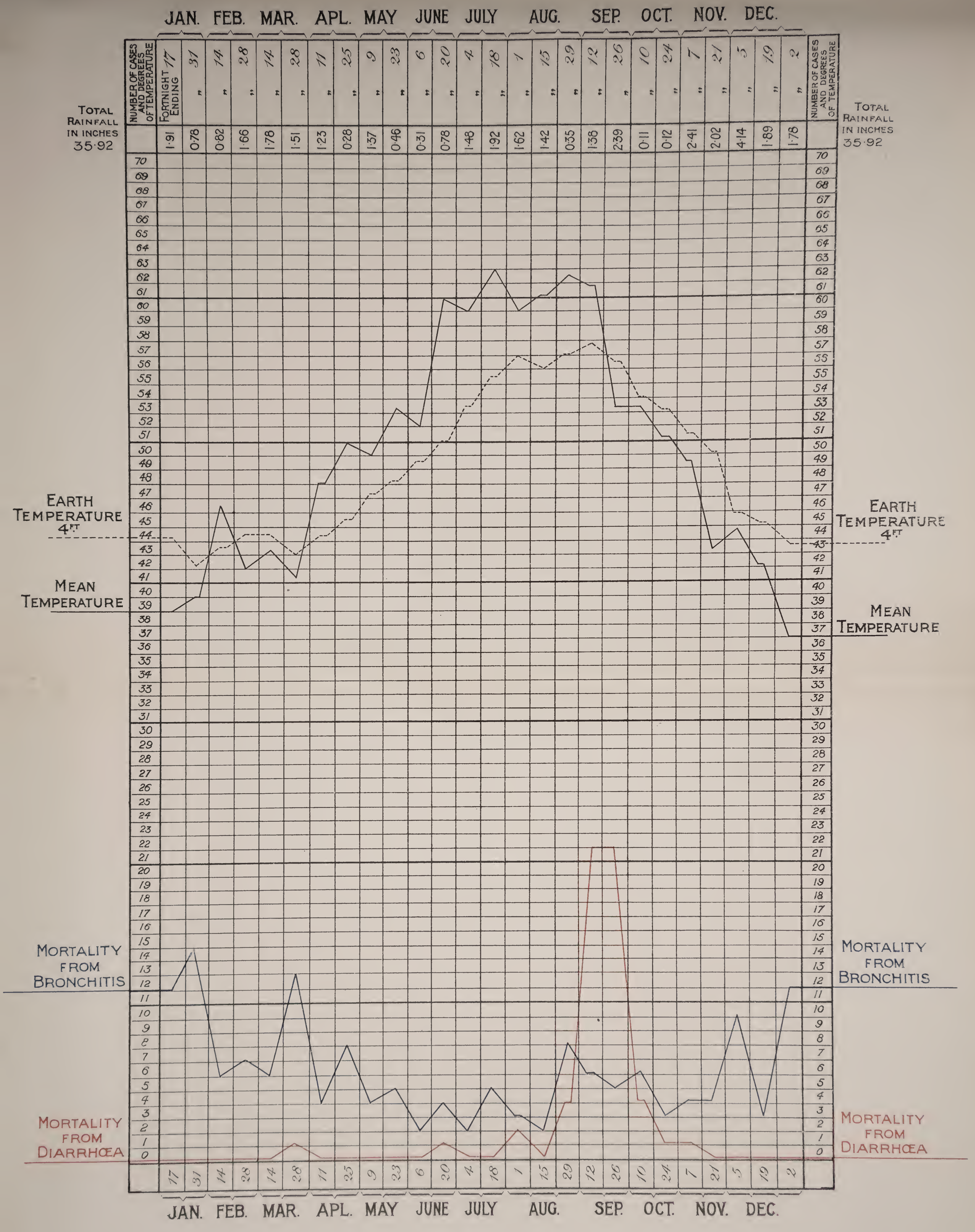
INFANTILE MORTALITY, 1914.



ZYMOTIC DISEASES, 1914.

The Red Spots ● indicate Deaths from Scarlet Fever.
The Blue Spots ● indicate Deaths from Typhoid Fever.
The Green Spots ● indicate Deaths from Diphtheria.




JAN. FEB. MAR. APL. MAY JUNE JULY AUG. SEP. OCT. NOV. DEC.
Fortnight ending 17, 31, 14, 28, 14, 28, 11, 25, 9, 23, 6, 20, 4, 18, 1, 15, 29, 12, 26, 10, 24, 7, 21, 5, 19, 2
Total Rainfall in inches 35·92
1·91, 0·78, 0·82, 1·66, 1·78, 1·51, 1·23, 0·28, 1·37, 0·46, 0·31, 0·78, 1·48, 1·92, 1·62, 1·42, 0·35, 1·38, 2·39, 0·11, 0·12, 2·41, 2·02, 4·14, 1·89, 1·78
Number of cases and degrees of temperature
70 69 68 67 66 65 64 63 62 61 60 59 58 57 56 55 54 53 52 51 50 49 48 47 46 45 44 43 42 41 40 39 38 37 36 35 34 33 32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 0
Earth Temperature 4FT
Mean Temperature
Mortality from Bronchitis
Mortality from Diarrhœa

Report on Tuberculosis for the year ending Dec. 31st, 1914,

BY

A. MIDDLETON HEWAT, M.D., D.P.H.,

TUBERCULOSIS OFFICER, and ASSISTANT MEDICAL OFFICER OF HEALTH.

INTRODUCTORY.

The year 1914 has been an important one in connection with the control of Tuberculosis in Preston.

In January the first Tuberculosis Officer for the Borough was appointed. In March the Tuberculosis Exhibition was held in the town and was generally considered to have done much towards the education of the public. Between April and June, a Tuberculosis Nurse, a Clerk, a Caretaker and his wife were appointed to work in connection with the Tuberculosis Dispensary.

On June 29th, the Tuberculosis Dispensary was opened to the public. Between April and December, a joint sub-committee of the Health and Insurance Committees spent much time in an endeavour to procure a suitable site for a combined Sanatorium and Hospital for advanced cases of Tuberculosis. The site first chosen was rejected by the Health Committee as unsuitable. The second selection was rejected by the Town Council on account of its propinquity to a residential neighbourhood, and at the same time a suggestion was made to the sub-committee that the two proposed sites were too near the town, and that they should look further afield. The Sub-Committee therefore chose a site on Ashley Hall Farm, near Longridge, eight miles from Preston, and this site was approved by the Town Council and the Local Government Board, and arrangements have now been made to purchase it.

The site is a good one, situated 375 feet above sea level, with a gradual slope to the south. The sub-soil is mixed, part clay and part gravel and loam, and is extremely dry. It is 15½ acres in extent, and has facilities for water supply, sewage disposal, lighting, etc. It is moreover only one mile from a convenient railway station communicating directly with Preston. Plans are now in process of completion which will be submitted in due course for the approval of the authorities.

MORTALITY AND NOTIFICATION STATISTICS.

In commencing a campaign of any kind, it is of the first importance to assess the strength of the enemy. In the campaign against Tuberculosis this is equally a necessity.

The following table gives the death rates from Tuberculosis of the lungs per 1,000 of the population for each 5 year period, since the year 1871. For the first three periods it does not include deaths of Preston residents in the Workhouse which is outside the Borough, but from thence onwards these deaths are included.

1871-1875	2·92	per	1000	population.
1876-1880	2·47	,,	,,	,,
1881-1885	2·01	,,	,,	,,
1886-1890	1·87	,,	,,	,,
1891-1895	1·77	,,	,,	,,
1896-1900	1·41	,,	,,	,,
1901-1905	1·20	,,	,,	,,
1906-1910	1·12	,,	,,	,,

This table shows a steady diminution in the death rate which is seen generally throughout England and is attributable to the general improvement in sanitation, housing, and the standard of living. If this diminution were likely to go on at the same rate one might be tempted to hold one's hand in inaugurating new measures for the control of Tuberculosis.

Unfortunately, however, when one considers the death rates for the individual recent years, one is struck by the fact that the rate is almost stationary and that apparently the limit has been reached of what can reasonably be expected from indirect measures of sanitation, and that one must now adopt measures directly aimed against the disease.

The yearly figures from 1901 (including transferable deaths of Preston residents in other places) are as follows :—

1901	1·12	1908	1·10
1902	1·20	1909	1·04
1903	1·14	1910	·99
1904	1·30	1911	1·27
1905	1·24	1912	1·02
1906	1·25	1913	1·08
1907	1·20	1914	·92

It is satisfactory that the death rate from Tuberculosis of the Lungs, during 1914, is the lowest recorded, but it is only a fraction below that for 1910. Again the rate for 1911 was considerably higher than that for 1901.

The death rates from Tuberculosis of organs other than the lungs are only available since 1901. Including transferable deaths they are as follows :—

1901	1·30		
1902	1·20		
1903	·80	5 yearly average	1·00
1904	1·01		
1905	·70		
1906	·46		
1907	·54		
1908	·64	5 yearly average	·59
1909	50		
1910	·79		
1911	·43		
1912	·38	4 yearly average	·40
1913	·44		
1914	·35		

The very great fall between the 5 yearly averages 1901 - 1905 and 1906 - 1910 was due in part to a stricter classification being adopted as to what should be included under the term "Other Tubercular Diseases."

Allowing for that however, there does seem a tendency towards a decrease in the number of deaths from other tubercular diseases.

During past years no separate death rates have been obtained for males and females, but during 1914 they were as follows :—

Pulmonary Tuberculosis.

Males ... 60 deaths. ... ... Death rate 1.10 per 1000.

Females ... 49 deaths. ... ... Death rate 0.76 per 1000.

In Preston therefore, as in the whole of England, the male death rate from this disease is in excess of the female.

Non-Pulmonary Tuberculosis.

Males ... 15 deaths. ... ... Death rate 0.28 per 1000.

Females ... 26 deaths. ... ... Death rate 0.41 per 1000.

The ages at which deaths occurred are set forth in Tables A. and B.

The number of deaths from Tuberculosis in any community is not strictly speaking an index of the amount of Tuberculosis in the locality. Numerous factors must be taken into consideration. Two of which are, firstly the degree of immunity among the population, resulting in the recovery of a larger or smaller number of those infected, and secondly, the tendency of the persons affected with Tuberculosis to emigrate to a healthier or more suitable climate. Various authorities have attempted to fix a factor which multiplied by the number of deaths should give one a rough idea of the actual amount of Tuberculosis existing in a locality, but as this factor varies from 3 to 10 according to different writers, its value is questionable.

In endeavouring to estimate the amount of Tuberculosis, some help is forthcoming from a consideration of the number of notifications of the disease received by the Medical Officer of Health.

In 1908 the Local Government Board issued the Public Health (Tuberculosis) Regulations, 1908, which came into force in January 1st, 1909, and required the notification to the Medical Officer of Health of all cases of Tuberculosis of the Lungs coming under the notice of the Poor Law Authorities.

The Public Health (Tuberculosis in Hospitals) Regulations came into force on May 1st, 1911, and required notifications of all cases attending Public Hospitals and Dispensaries.

The Public Health (Tuberculosis) Regulations, 1911, came into force on January 1st, 1912, and provided for the compulsory notification of all cases of Pulmonary Tuberculosis.

A further step was taken in 1912, when the Local Government Board issued the Public Health (Tuberculosis) Regulations, 1912, to come into force on January 1st, 1913. These Regulations required the notification of all cases of all kinds of Tuberculosis, and superseded all previous requirements.

Various forms are used for notification under these Regulations depending on whether the Doctor notifying is acting as Private Medical Practitioner, as School Medical Officer, or as Medical Officer to a Poor Law Institution or Sanatorium.

The notifications must in all cases be sent to the Medical Officer of Health of the district where the patient usually resides. Thus as an example, if a patient is admitted from Longridge to Preston Royal Infirmary suffering from Tuberculosis, the Medical Officer at the Infirmary should notify the case to the Medical Officer of Health for Longridge, not to the Medical Officer of Health for Preston.

We have now, therefore, a register of all notified cases of Pulmonary Tuberculosis since the beginning of 1912, and of all kinds of Tuberculosis since February 1st, 1913.

The number of primary notifications received is as follows:—

Year	Pulmonary Tuberculosis	Non-Pulmonary Tuberculosis
1912	161	not notifiable
1913	184	73
1914	291	29

The large increase in notifications of Pulmonary Tuberculosis during 1914 may be attributed to some extent to the opening of the Tuberculosis Dispensary. The large number of cases of Non-pulmonary Tuberculosis notified during 1913 was due to the fact that it was the first year of notification, and, therefore, many old-standing cases were notified which would have been notified in former years had notification then been in force.

At the end of 1914 an estimate was made of the probable number of notified cases of tuberculosis of all kinds still living in the Borough. In making this estimate all cases known to have died or left the town were excluded, but some cases now cured were probably included. The number arrived at was 449. It will be interesting to notice how this number rises or falls in future years. It should form an important index as to the amount of Tuberculosis in the Town. To make it really accurate however, one would have to deduct all cured cases and **all** cases removed from the town, and this is an extremely difficult if not an impossible undertaking.

Details of all notifications received during 1914 will be found in Table 2a.

PROCEDURE AFTER NOTIFICATION.

As soon as notifications are received by the Medical Officer of Health, they are at once transferred to the Tuberculosis Dispensary and dealt with in connection with that institution. Nearly all the clerical work in connection with tuberculosis has now been removed from the Health Office to the Tuberculosis Dispensary. The two departments are within a few minutes walk of each other and constant inter-communication is maintained. The uniformity of action is further maintained by the fact that the Tuberculosis Officer is also Assistant Medical Officer of Health. The method adopted avoids all useless duplication of work and the records kept at the Dispensary are available when necessary for all Officials of the Health Department.

In this report therefore, all administrative work in connection with Tuberculosis as well as the clinical work will be dealt with under the heading of "Work of the Tuberculosis Dispensary."

THE TUBERCULOSIS DISPENSARY.

This institution situated most centrally and conveniently at 2 North Road, just off Church Street, and within two minutes walk of the Town Hall and Central Tramway Station, was opened on June 29th. The premises are excellently suited for the purpose, having been formerly the commodious residence of a medical man. The rooms used comprise—on the ground floor, office, patients' waiting room, dressing cubicles and consulting room; on first floor, drug dispensary, laboratory, staff lavatory, and Nurses rooms. In separate rooms shut off from the main building there is accommodation for the caretaker and his wife. Before occupation the premises were thoroughly repaired, painted, and the walls decorated with washable distemper. The fitting out comprised all that could reasonably be required while avoiding any unnecessary expenditure.

The staff consists of Tuberculosis Officer, Nurse (Miss Maud Lerry), Clerk Dispenser (Mr. A. W. Barnes), Caretaker and his Wife (Mr. and Mrs. Ingram).

Owing to the fact that the Clerk Dispenser, Mr. A. W. Barnes, enlisted in the Army for temporary service in September, Miss Ida Dobson was appointed to act during his absence.

WORK OF THE TUBERCULOSIS DISPENSARY.

VISITING OF NOTIFIED CASES.

All cases of Tuberculosis notified to the Medical Officer of Health are at once visited by the Tuberculosis Nurse unless the notifying medical man directs otherwise, which is exceedingly rarely. A full report is made by the Nurse as to the patient's occupation, and home conditions, the health of other members of the family, the financial effect of the patient's illness, and other special points of importance.

The patient is informed of the existence of the Tuberculosis Dispensary and told to consult his medical man as to whether he wishes the patient to attend the Dispensary or not. By this method it is found that a very large proportion of notified cases become patients at the Dispensary.

Housing Conditions.

The Housing conditions of notified cases are of particular importance and the following figures are therefore given :—

	Rent		Number of Houses.
Rents of Houses occupied :—	Under 3s.	......	2
	3s. to 3s. 11d.	......	45
	4s. to 4s. 11d.	......	51
	5s. to 5s. 11d.	......	17
	6s. to 6s. 11d.	......	15
	7s. to 7s. 11d.	......	3
	8s.	......	1
	Lodgers	......	12
	No Rent	......	2
			148

The bulk of the houses occupied were therefore let at rents between 3s. and 5s. The average rent paid was 4s. 5d.

The number of rooms in each house, including both living rooms and bedrooms, was as follows :—

2 Houses had 7 rooms each.
9 ,, ,, 6 ,, ,,
50 ,, ,, 5 ,, ,,
49 ,, ,, 4 ,, ,,
38 ,, ,, 3 ,, ,,

The average number of rooms per house being 4.2.

No house had less than 3 rooms.

Considering the living rooms and bedrooms separately we find that :—

49 Houses had 1 living room.
95 ,, ,, 2 ,, rooms.
4 ,, ,, 3 ,, ,,

while :—

84 Houses had 2 Bedrooms.
56 ,, ,, 3 ,,
8 ,, ,, 4 ,,

No house, therefore, had less than two bedrooms and one living room, a condition of affairs which is satisfactory. In very few cases were sanitary defects found in houses. The majority were slight matters such as stopped waste pipes to sinks. In two cases damp walls were reported, and in four cases windows were not made to open. These were all satisfactorily dealt with by the Sanitary Inspectors.

In six cases the Nurse reported that the house was overcrowded. In some of these cases the people moved to a larger house, while in others the difficulty was met to some extent by some member of the family sleeping in a living room.

The number of persons living in each house was also ascertained. The largest number was 11 in one house of five rooms. The smallest was one person in a house of four rooms. The worst case of overcrowding was eight persons in a house of three rooms.

The average number of persons per house was 4.5, while the average number of rooms per house was 4.2, so that there was approximately one person per room as an average throughout the 148 houses visited.

The Nurse's report is carefully considered by the Tuberculosis Officer, and any insanitary housing conditions are at once reported by him to the Sanitary Inspector for the district.

In many cases patients are found sleeping in the same bed as other members of the family but this is frequently capable of remedy on the advice of the Nurse.

Of 148 cases visited by the Nurse since the opening of the Dispensary, 95 were found to be sleeping alone in a bed, while 53 (i.e., 36%) were sleeping in the same bed as other persons. Of the 95 who slept alone, 77 had a room to themselves. For a manufacturing town like Preston, these figures are fairly satisfactory. Of course in many cases after the Nurse has paid one or two visits, a much larger proportion of patients manage to get at any rate a bed if not a bedroom to themselves. In many cases where ultimately it appears impossible for the patient to get a bed to himself, the difficulty could be got over by lending a bedstead or possibly a shelter fitted with a bedstead to the patient. Up to the present this has not been done, but it is worthy of consideration. When the Hospital for advanced cases is built the worst of these cases will be transferred to it, and this will still further lessen the danger of bed infection.

FINANCIAL ASPECT OF TUBERCULOSIS.

It has been truly said that Poverty and Tuberculosis walk hand in hand. With the one exception of intemperance, I doubt whether any other single cause produces a greater amount of real poverty than does Tuberculosis. Where the bread-winner of a family is struck down with this disease, the plight of the household is indeed serious. The presence of an invalid in the house increases the ordinary expenses, and at the same time little or no money is coming into the house. The Insurance Act and the Poor Law Authorities help many cases, but after all a family of perhaps 4 or 5 cannot exist on 10s. a week, and even that only lasts for 26 weeks under the Insurance Act, and then drops to 5s. a week if the insured person claims Disablement Benefit.

It is additionally unfortunate that Poverty and Tuberculosis form a vicious circle from which it is often almost impossible to extricate a family. A case of Tuberculosis in the family may in the first place lead to poverty, poverty probably means overcrowding in a small house and lack of sufficient nourishment, thus only too often leading to Tuberculosis in other members of the family.

The large amount of female employment in Preston, although detrimental in many respects is fortunately a preventative of a certain amount of poverty owing to Tuberculosis. Where the father of a family develops Tuberculosis it is often found that because his wife, and possibly a daughter, work in the mill, the finances of the family although lowered, are still able to support the upkeep of the household.

In 80 of the cases notified during 1914, I was able to obtain definite information as to the economic effect of the illness. The average loss per week was found to be 17s. The highest weekly loss was 40s., and the lowest 3s.

Four cases were found to be in receipt of Poor Law Relief at the time of notification, the average weekly sum being approximately 11s. 4d.

OCCUPATIONS.

The occupations were ascertained in 291 notified Pulmonary Cases and in 29 notified Non-Pulmonary cases. These are classified in Table C.

It will be seen that the occupations most involved are :—

Weavers ...	61	Other Mill Workers ..	22
Labourers ...	23	Housewives ...	14
Winders ...	10	Clerks ...	10
Spinners ...	7		

Among the labourers, many were labourers in mills, but unfortunately the exact character of the labouring work was not specified in most cases.

The large number of mill workers suffering from Tuberculosis is a matter for serious consideration, and I hope to deal more fully with this question in my next annual report. It would be unfair to draw premature conclusions based on superficial evidence after only six months work at the Tuberculosis Dispensary.

WORK OF THE TUBERCULOSIS NURSE.

The routine work of the Tuberculosis Nurse consists in the visiting of all notified cases, and re-visiting at intervals of as many cases as her time permits. All notified cases are visited and re-visited by the Nurse apart altogether from the question of their being patients at the Tuberculosis Dispensary. If they are being attended by Panel or Private Practitioners it is found that the visits of the Nurse are of considerable value and appear to be appreciated both by the patients and the doctors. In addition, these visits enable the Tuberculosis Officer to follow to some extent the progress of each case.

The Nurse also attends at the Dispensary during six half days in each week and assists the Tuberculosis Officer. The time available for home visiting is thus much curtailed, and it is quite impossible to re-visit as frequently as desirable. This aspect has been pointed out to the Health Committee, who appear fully convinced of the necessity for adequate home visiting, but, owing to the War, further consideration of this question has been deferred.

During the year 1914, the Tuberculosis Nurse paid 279 first visits and 326 re-visits to notified cases.

CLINICAL WORK AT THE TUBERCULOSIS DISPENSARY.

The Tuberculosis Officer commenced his duties on March 1st, 1914, but as the Dispensary was not ready until the end of June, cases were seen at the Health Office, from March till July. In the statistics these cases have been added to those seen at the Dispensary between July and December.

Persons suffering or suspected to be suffering from Tuberculosis reach the Dispensary in the following ways :—

(1). Many are sent by General Practitioners for the opinion of the Tuberculosis Officer.

(2). Some, who have not been under any General Practitioner, come on their own account.

(3). Some are sent by the School Medical Officers and the School Attendance Officers.

(4). Some come to be examined in connection with their applications for Sanatorium Benefit from the Preston Insurance Committee.

(5). Some are recommended to come by the Tuberculosis Nurse because they have been living in the same house as a case of Tuberculosis. These cases are generally known as " Contacts."

When a case is examined by the Tuberculosis Officer a full clinical report is written out and the necessary information is sent to the General Practitioner, or to the School Medical Officer. In the latter case it is always definitely stated if the child is or is not to attend School.

General instruction as to the prevention of the spread of infection and as to personal hygiene are given to the patient or his relatives.

The further attendance and definite treatment of the patient at the Dispensary are arranged for, and if he has been under a General Practitioner the latter's consent is always obtained before treatment is undertaken. This is found to avoid all possibility of friction.

The treatment given at the Dispensary consists of definite instructions as to the daily life of the patient, as to resting, open-air, exercise, etc. All necessary drugs are supplied and are dispensed at the Dispensary. Antiseptic inhalations and masks for their use are provided. Tuberculin is administered to suitable cases. The varieties of Tuberculin used are those commonly known as P.T.O. and B.E.

Thermometers are supplied when necessary.

The only charges made are 1d. for each medicine bottle, and 6d. for each thermometer after the first.

The great point of Dispensary Treatment is to ensure the regular attendance of the patient and his constant supervision. This is carried out by keeping a list of all patients who attend, and when it is noticed that a patient has failed to attend, the Nurse visits his home, finds out the reason for his non-attendance, and if necessary persuades him to resume attendance.

In addition to the patients actually under treatment a very large number are under Dispensary supervision and attend once a month, or once a quarter to be examined and report their condition. Many of these patients are discharged Sanatorium cases, others are patients who have sufficiently recovered under Dispensary treatment to be able to do without active treatment, but who still require periodical supervision.

Some General Practitioners also send their patients to the Dispensary every 6 or 8 weeks in order to get the Tuberculosis Officer's report as to the patient's progress.

Between March and the end of 1914, 298 patients were examined by the Tuberculosis Officer, either at the Health Office, the Dispensary, or at the patient's home.

The classification of the stages of the disease in which patients were found is a difficult matter.

Turban's classification, which merely takes into account the amount of disease in the patient's lungs, is in my opinion unreliable as it ignores the general state of the patient's health. Turban divides all cases into three groups. Again, Philip's classification which takes into account the general condition of the patient, divides each of Turban's classes into four, according as to whether the general condition is slight, or bad, and as to whether the local or the general condition is the worse, thus making 12 classes in all. This seems an unwieldy division. I have, therefore, in this report adopted Williamson's modification of Philip's classification, which has six divisions and is set forth below. The 298 patients examined were found to be affected as follows :—

(a). Definitely suffering from Pulmonary Tuberculosis.

Stage 1 (Turban) with slight general toxæmia	59
„ „ „ marked „ „	25
„ 2 „ „ slight „ „	52
„ „ „ marked „ „	35
„ 3 „ „ slight „ „	25
„ „ „ marked „ „	31

(b). Suspected to be suffering from Pulmonary Tuberculosis...	40
(c). Suffering from Non-Pulmonary Tuberculosis...	4
(d). Not suffering from any form of Tuberculosis	27

The last 27 patients were found to have the following diseases :—

Asthma ...	2	Heart Disease ...	4
Anæmia ...	3	Simple Laryngitis ...	1
Adenoids ...	2	Pneumoconiosis ...	1
Chronic Bronchitis	4	No apparent disease	9
Emphysema ...	1		

During the six months of 1914 that the Tuberculosis Dispensary was open, 169 patients attended for treatment, while in addition 75 attended for purposes of diagnosis or observation, making a total of 244. Of these, 177 were persons insured under the National Insurance Act, and 67 were uninsured persons.

Owing to the short period that the Dispensary was open during 1914, it is impracticable this year to give any statistics as to progress of patients.

The following additional work was performed during the half-year at the Dispensary :—

141 Samples of Sputum were examined for Tubercle Bacilli.
502 Letters were sent to General Practitioners, Insurance Committee, etc.

The usefulness of the Dispensary appears to be becoming increasingly appreciated both by doctors and patients, and it will be found that the numbers for 1915 will greatly exceed those for 1914. It may be well to state that every person who applies for Sanatorium Benefit from the Preston Insurance Committee is examined by the Tuberculosis Officer, either at the Dispensary or at the patient's home.

The form of treatment suitable and available for each case is notified by the Tuberculosis Officer to the Insurance Committee.

In many cases Sanatorium Treatment is required but it has been rarely possible to admit the patient at once to a Sanatorium owing to the pressure on the accommodation. In such cases the patient's name is placed on the waiting list, and meanwhile he receives treatment, either from his panel doctor or at the Tuberculosis Dispensary.

It is necessary to emphasize here the functions of a Tuberculosis Dispensary as laid down in the Departmental Committee's Report.

THE DISPENSARY SHOULD BE :—

"(1). A RECEIVING HOUSE AND CENTRE OF DIAGNOSIS."

> "To the tuberculosis officer patients will come or be sent in every stage "of illness. This means not only patients with definite tuberculosis, but "patients in a delicate state of health, regarding whom there may be "suspicion. As the work of a dispensary becomes better understood in "any area, it will be found that persons will come or be sent to ascertain "whether or not they are tuberculous. In this way the possibility of early "detection is much increased."

"(2). A CLEARING HOUSE AND CENTRE FOR OBSERVATION."

" When the diagnosis has been made, the tuberculosis dispensary should " serve as a ' clearing house ' through which persons suffering from the " various types of tuberculosis should be passed, whatever the form of the " disease, or whatever the authority or person responsible for meeting " the expense of the treatment. These persons will be classified by the " tuberculosis officer connected with the dispensary, who should have " some beds at his disposal for the purpose of observation, and sent on to " the person or institution providing the treatment appropriate to the " individual case. Thus the tuberculosis officer must necessarily be in the " closest touch with the general practitioners and with the responsible " officials of institutions providing treatment. The success of the dispensary " in this respect will depend largely on how far it is the effective centre " of anti-tuberculosis operations, and on the extent to which it is " co-ordinated with the other elements in the scheme."

"(3). A CENTRE FOR CURATIVE TREATMENT."

" A large proportion of cases of pulmonary tuberculosis and some cases " of other forms of tuberculosis, can be adequately treated in the patient's " home. For many of these cases the tuberculosis dispensary will be the " centre of treatment. The cases so treated will usually be persons who " may safely continue at their several occupations, whether at home or " elsewhere. Treatment provided by the dispensary will include not only " general ' sanatorium treatment,' whether in a patient's home or in a " shelter, but also more special methods of sanatorium treatment, for " example, treatment by tuberculin. Those cases in which home treatment " does not yield satisfactory results will need to be re-classified and drafted " to the appropriate institution. Reference may here not inappropriately " be made to the importance of having the teeth and mouths of patients " in a satisfactory condition. The committee are of opinion that it will be " advisable to make arrangements with dental practitioners for providing " treatment for certain cases."

"(4). A CENTRE FOR EXAMINATION OF 'CONTACTS.'"

"The information coming to the dispensary may lead to the discovery of "tuberculosis in persons living in close contact with those suffering from "the disease. This possibility of discovery of other cases is a very valuable "part of the machinery of control and prevention, as it leads to the detection "of a large number of cases (otherwise neglected) at such an early stage "of the disease that suitable treatment may readily and successfully be "applied. The cases thus discovered should be classified and distributed "from the 'Clearing House' as already detailed. Where clinical "examination in the home results in the discovery of insanitary conditions "of environment, the information obtained will be referred to the "appropriate department of the sanitary authority."

"(5). A CENTRE FOR 'AFTER-CARE.'"

"The dispensary should likewise be of considerable service in relation "to patients who have been under treatment at home or for varying "periods at a sanatorium or other institution, and for whom 'after-care' "is desirable. For this purpose, patients on discharge from the several "institutions, should be referred again to the dispensary, which in con- "junction with the general medical practitioners, and voluntary care com- "mittees, should secure such medical supervision as may be necessary to "ensure that the benefit obtained from institutional treatment should "be as permanent as possible."

"The importance of 'after-care' cannot be exaggerated. Unless 'after- "care' is efficient and systematic cases of relapse will be more frequent, "with the result that large and unnecessary calls will be made upon the "funds available. 'After-care' should be undertaken with discretion, "and should so far as possible avoid publicity until the prejudice against "'discharged patients created by the exaggerated view taken by the "public of their infectivity has been overcome."

"It may be advisable at some time to establish machinery whereby "suitable employment might be provided for selected cases after "discharge from treatment, for whom an immediate return to their previous "occupation might involve risk of relapse and consequent economic "waste. The Committee hope to refer to this matter in the Final "Report."

"(6). A CENTRE OF EDUCATION AND INFORMATION."

> " The tuberculosis dispensary should constitute a centre towards which " persons interested may turn for information and guidance. In course " of time, by careful records on the case sheets and schedules, the accumulation of clinical facts and statistics at the tuberculosis dispensary should " prove of great service in investigation connected with tuberculosis. " These facts and statistics, which should be collected upon a uniform " system, and should be related to the information obtained by the medical " officer of health in connection with the general death and sickness " reports of the community, should also be at the service of those who are " engaged in research, and should be of considerable value as data in " that connection. The information so obtained, together with the " systematic training of individual patients in the measures necessary " for their own treatment, should materially assist in the education of the " community generally, and thus serve to promote the prevention of the " disease. In addition, the dispensary should become a valuable centre " of medical education. This should prove of importance in the special " training of medical practitioners and nurses."

So far as the Dispensary in Preston is concerned, it fulfils to a great extent all these objects, but at the same time it is handicapped by :—

(1). The lack of sufficient Sanatorium accommodation.
(2). The lack of observation and emergency beds.
(3). The lack of beds for Advanced cases.
(4). The lack of a Voluntary " After-care " Committee.

The Health Committee appear prepared to meet all these problems in an appropriate manner, but the outbreak of the War has naturally retarded their procedure.

I am afraid that too much emphasis is laid by some people on the function of the Dispensary as a Centre for Curative treatment and too little on its other function as a centre for general tuberculosis organisation. For my own part, while having no desire to minimise the importance of home treatment, I consider the organisation and observation by far the more important.

The value of dispensary treatment and supervision can only be really felt when the dispensary is backed up by all the other agencies of the complete scheme.

It will be noticed that in the Report of the Departmental Committee, quoted above, the function of a Dispensary as a place for treatment is only mentioned third, following upon its functions as a centre for diagnosis, i.e. finding the disease, and a centre for classification, observation and correlation of the different factors in treatment (i.e. Sanatorium, General Practitioners, Dispensary, etc.)

The establishment of a Voluntary " After Care " Committee had been decided upon and was in course of formation when War was declared and the energies of most of the people concerned were directed into other channels in connection with War Service. Under these circumstances it was decided to delay the formation of this Committee till the termination of the War.

The essential parts of a complete anti-tuberculosis scheme embrace:—

(1). A Tuberculosis Dispensary.
(2.) A Sanatorium for early cases.
(3). A Hospital for advanced cases.
(4). Provision for treatment of surgical Tuberculosis.
(5). Co-operation of General Practitioners.
(6). Disinfection of infected houses.

The work of the Dispensary has been already considered.

As regards Sanatorium accommodation during the year 1914, the Preston Insurance Committee maintained for insured persons an average of 16 beds at Aitken Sanatorium near Bury, at Bowdon Sanatorium, Cheshire, and at Felix House, Sanatorium, near Durham. Sixty-eight patients were treated at these Institutions during the year.

Notes on Insured Sanatorium patients will be found later in this Report, p. 55.

The Health Committee had not provided during 1914 any Sanatorium accommodation for non-insured persons but this has now been to some extent remedied during 1915.

The necessity for a Hospital for advanced cases is fully realised and will be dealt with in connection with the proposed new Sanatorium.

The provision of treament for Surgical Tuberculosis is intimately bound up with the whole question of Tuberculosis in children and was the subject of a special Report which I made early in 1915 to the Health Committee and the School Medical Inspection Sub-Committee.

While approving generally of my Report, further action was deferred till the termination of the War. At the present time a large number of cases of Surgical Tuberculosis are dealt with at Preston Royal Infirmary.

The Co-operation of the General Practitioners in any area is essential to the smooth working and success of all anti-tuberculosis measures. It is to a large extent from them that the Dispensary and through the Dispensary, the other institutions draw their patients. In Preston we have been most fortunate in the way that the General Practitioners have co-operated with the Dispensary. A large proportion of the patients who come to the Dispensary are sent by General Practitioners for the opinion of the Tuberculosis Officer. In each case a full report is sent to the General Practitioner and the line of treatment is indicated. Close touch is maintained throughout the patient's treament between the Tuberculosis Officer and the General Practitioner. In the case of insured persons who are receiving domiciliary treatment, a report is sent by the General Practitioner to the Tuberculosis Officer each quarter and if necessary the Tuberculosis Officer visits the case during the progress of treatment in consultation with the General Practitioner.

When patients are sent to or discharged from Sanatorium, notice is sent to the General Practitioner.

If a patient attending the Dispensary becomes worse and is confined to the house or to bed, a letter is sent to his General Practitioner informing him of the fact and if the patient is an insured person, similar notice is sent to the Insurance Committee.
One's endeavour in joint work of this nature should be to avoid so far as is humanly possible the expression of contrary opinions to the patient. This endeavour has, I think, been loyally fulfilled between the Dispensary and the General Practitioners during the period under review.

I personally owe much to the General Practitioners in the town for the ready help which they have given me in trying to make the greatest use of the Tuberculosis Dispensary. I can only say that during my first year of office there has not been the slightest friction or unpleasantness between any General Practitioner and the officials of the Dispensary.

The disinfection of Infected Houses is carried out in Preston with great care. A system is in use whereby the Tuberculosis Dispensary notifies to the Health Department all cases where disinfection is required.

As a general rule disinfection is done :—

(a) When a patient dies.
(b) When a patient moves to another address.
(c). When a patient moves to an institution (i.e., Sanatorium, Poor Law Infirmary, etc.)

After the disinfection has been carried out the notice is returned to the Tuberculosis Dispensary signed by the responsible Sanitary Inspector.

The agent used for disinfection is in all cases Formalin, either as a vapour or as a spray.

The following is an extract from a Report which I presented in March, 1915, to the Preston Insurance Committee, and deals with discharged Sanatorium Patients :—

This report deals with patients discharged from Sanatoria between February 2nd 1913, when the Committee's first Sanatorium patient was discharged, and January 1st, 1915. The state of the patients on which the following statistics are based is that ascertainable on February 27th, 1915. The period since the patients' discharge from Sanatoria will thus vary from two years and one month to two months, the average period being therefore roughly rather over one year. The first table deals with all the patients of both sexes, 78 in number, considered together and with no reference to the length of their stay in Sanatorium.

TABLE I.

Patients in whom the disease is apparently arrested	23 — 29%.
Patients who are fairly well but in whom the disease is still active	27 — 35%.
Patients who are in chronic ill-health and likely to die soon	12 — 15%.
Patients who are already dead	8 — 10%.
Patients whose present condition is unknown, several having left the town	8 — 10%.

The above table, including as it does several patients who only spent a very short period in Sanatorium, is hardly a correct one on which to base any conclusions as to the value of Sanatorium Treatment. I have therefore sub-divided the patients into males and females, and into those who spent less than 12 weeks in Sanatorium, and those who spent 12 weeks or more. I should mention here that the minimum period for which patients are sent to Sanatorium by the Committee is 12 to 13 weeks, but this period is in many cases extended on the advice of the Medical Superintendent of the Sanatorium, endorsed by your Medical Adviser.

It is an interesting fact that of the 8 patients who are now dead, four spent more than 12 weeks in Sanatorium, and four less than 12 weeks. I think this can be explained in this way :—Your Medical Adviser sees many patients whose condition is such that it is an open question whether or not they should be sent to Sanatorium. Frequently one gives them the benefit of the doubt and sends them. On arrival at the Sanatorium, the Medical Superintendent is also in two minds, he either decides to discharge them after a few weeks, or give them a prolonged chance, say 16 weeks or more, but at the end they are little improved. Hence I think it comes that the deaths are equally divided between both periods.

The question of the ability of the patient to return to work, and to earn his own living after discharge from Sanatorium is an important one. I have made enquiries in regard to this matter as far as the male patients are concerned. Of the 32 males who remained 12 weeks or longer in Sanatorium, 22, or 69%, are now at work, while of the 12 males who remained less than 12 weeks in Sanatorium, 6, or 50%, are now at work. Statistics regarding working capacity of females are of little value because in most cases the patients are mill workers, and as mill work is essentially prejudicial to the health of a tubercular patient, many of these women, unless absolutely compelled to do so for financial reasons do not return to the mill although physically able to earn their living. Many of them devote themselves to housework, the amount of which they can regulate as their strength and physical condition permits.

I append here Tables 2, 3, 4 and 5.

TABLE 2.

Males. 12 Weeks and over.	Total 32.
Disease apparently arrested	13 — 41%.
Fairly well but disease active	10 — 31%.
Chronic ill-health, likely to die soon	3 — 9%.
Dead	3 — 9%.
Condition unknown	3 — 9%.

TABLE 3.

Males. Less than 12 weeks.	Total 12.
Disease apparently arrested	2 — 17%.
Fairly well, but disease active	3 — 25%.
Chronic ill-health, likely to die soon	5 — 42%.
Dead	0 — 0%.
Condition unknown	2 — 17%.

TABLE 4.

Females. 12 Weeks and over.	Total 24.
Disease apparently arrested	7 — 29%.
Fairly well, but disease active	13 — 54%.
Chronic ill-health, likely to die soon	1 — 4%.
Dead	1 — 4%.
Condition unknown	2 — 8%.

TABLE 5.

Females. Less than 12 weeks.	Total 10.
Disease apparently arrested	1 — 10%.
Fairly well, but disease active	1 — 10%.
Chronic ill-health, likely to die soon	3 — 30%.
Dead	4 — 40%.
Condition unknown	1 — 10%.

On the whole I think one can look upon the results as fairly satisfactory, especially considering that until July, 1914, there was no Tuberculosis Dispensary in existence, and therefore the after-care of discharged patients was the direct care of no one. It is now the rule that every patient on discharge from Sanatorium reports himself at once to the Tuberculosis Officer, is thoroughly examined and advised as to further treatment and as to his capacity for work. Thereafter he is advised to report at the Dispensary monthly, three-monthly, or as frequently as his condition seems to demand. I am pleased to say that the majority of the patients appear only too willing to avail themselves of this system, which is by no means the smallest advantage which accrues to them under the misleading title of Sanatorium Benefit.

My only regret in issuing this report is that I am unable further to sub-divide the patients according to the degree of disease at the date of their first being granted Sanatorium Benefit. A large number of the patients were dealt with before my appointment as your Medical Advisor, and before the opening of the Dispensary enabled one to keep an accurate record of each patient's condition and progress. In future years a more detailed survey will, I hope, be possible.

TABLE A.

PULMONARY TUBERCULOSIS.

Table showing Number of Deaths (including Transferable Deaths) and Mortality Rate during the Year 1914.

Age Periods	0 - 1	1 - 2	2 - 5	5 - 15	15 - 25	25 - 45	45 - 65	65 & over	Total
Females	...	...	...	7	11	17	12	2	49
Males	...	...	1	3	11	22	20	3	60
Total ...	...	...	1	10	22	39	32	5	109

Sex Rates.

Females	0.76 per 1000.
Males	1.10 per 1000.

Total Rate (males and females) 0.92 per 1,000 of Population.

TABLE B.

OTHER TUBERCULOUS DISEASES.

Table showing Number of Deaths (including Transferable Deaths) and Mortality Rate during the Year 1914.

Age Periods.	0 - 1	1 - 2	2 - 5	5 - 15	15 - 25	25 - 45	45 - 65	65 & over	Total
Females	8	2	3	5	3	...	3	2	26
Males	5	1	4	1	...	2	2	...	15
Total	13	3	7	6	3	2	5	2	41

Sex Rates.

Females	0.41 per 1000.
Males	0.28 per 1000.

Total Rate (males and females) 0.35 per 1,000 of Population.

TABLE C.

Occupations of Tuberculosis Cases notified during 1914.

	Pulmonary			Non-Pulmonary		
	Male.	Female	Total.	Male.	Female	Total.
Army and Navy	3	...	3	1	...	1
Bricklayers	2	...	2	...	...	...
Bottling Works Employees	...	1	1	...	...	...
Boot Polish Works Employees	...	1	1	...	...	...
Boot and Shoe Makers	4	...	4	...	...	...
Blacksmiths	1	...	1	...	...	...
Bakers	1	...	1	...	...	...
Carriage Painters	2	...	2	...	...	...
Cattle Drovers	1	...	1	...	...	...
Children, School Age	6	13	19	3	5	8
,, Under School Age	3	4	7	2	1	3
Clerks	8	2	10	1	...	1
Cotton Card-room Hands	...	7	7	...	...	...
,, Spinners	5	2	7	1	...	1
,, Weavers	4	57	61	...	4	4
,, Winders	...	10	10	...	...	...
,, Other Workers	15	7	22	1	...	1
Carters	3	...	3	...	...	...
Domestic Servants	...	5	5	...	...	...
Dyers	3	...	3	...	...	...
Engineers and Mechanics	3	...	3	...	...	...
Electricians	1	...	1	1	...	1
Firemen	2	...	2	...	...	...
Gold Embroiderers	...	1	1	...	...	...
Gardeners	2	...	2	...	...	...
Hairdressers	1	...	1	...	...	...
Hall Keepers	1	...	1	1	...	1
Housewives	...	14	14	...	...	...
Hawkers	2	...	2	...	...	...
Iron Workers	4	...	4	...	...	...
Labourers	20	...	20	1	...	1
Carried forward	97	124	221	12	10	22

Table C.—Continued.

	Pulmonary			Non-Pulmonary		
	Male.	Female	Total.	Male.	Female	Total.
Brought forward	97	124	221	12	10	22
Labourers (in-door)	3	...	3	...	...	...
Laundry Workers	...	1	1	...	...	...
Midwives	...	1	1	...	...	...
Metal Workers	4	...	4	...	...	...
Moulders	...	...	...	1	...	1
Musicians	1	...	1	...	...	...
Printers and Xmas Card Workers	3	2	5	...	...	...
Photographers	1	...	1	...	...	...
Postmen	2	...	2	...	...	...
Paper Bag Makers	...	1	1	...	...	...
Prison Warders	1	...	1	...	...	...
Plasterers	1	...	1	...	...	...
Publicans and Barmaids	1	1	2	...	...	...
Parcel Boys	1	...	1	...	...	...
Rubber Workers	1	...	1	...	...	...
Railway Workers	3	...	3	...	...	...
Stone Masons	1	...	1	...	...	...
Shuttle Makers	1	...	1	...	...	...
Shopkeepers and Assistants	5	2	7	1	...	1
Salesmen, Agents and Collectors	3	...	3	...	...	...
Tailors and Dressmakers	3	2	5	...	...	...
Tram Drivers	1	...	1	...	...	...
Teachers	1	1	2	...	...	...
Valuers	1	...	1	...	...	...
Van Men	1	...	1	...	...	...
Wood Turners and Cabinet Makers	2	...	2	...	...	...
Waiters and Waitresses	1	1	2	...	...	...
Warehouse-men	2	...	2	...	...	...
No Occupation	9	5	14	2	3	5
Total	150	141	291	16	13	29